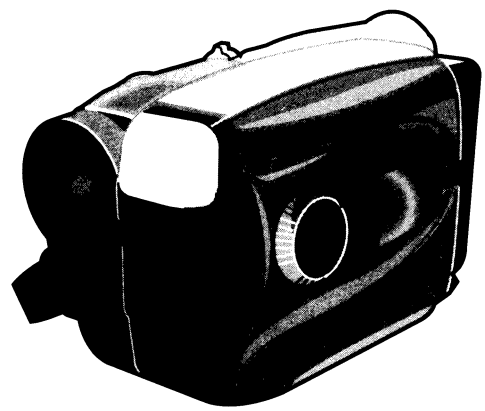
JVC

SERVICE MANUAL

COMPACT VHS CAMCORDER

GR-AX200EG/AX350EG/AX400EG



Compact VHS

VHS C PAL

SPECIFICATIONS *(The specifications shown pertain specifically to the model GR-AX350EG/AX400EG)*

GENERAL

Format	:	VHS PAL standard
Power source	:	DC 6 V⎓
Power consumption	:	GR-AX400 video light off: **5.7 W** GR-AX400 video light on: **8.7 W** GR-AX350: **5.9 W**
Signal system	:	PAL-type
Video recording system	:	Luminance: FM recording Colour: Converted sub-carrier direct recording Conforms to VHS standard
Cassette	:	VHS C cassette
Tape speed	:	23.39 mm/sec
Recording time Max.	:	45 minutes (with EC-45 cassette)
Operating temperature	:	0°C to +40°C
Operating humidity	:	35% to 80%
Storage temperature	:	–20°C to +50°C
Weight	:	GR-AX400: Approx. 800 g GR-AX350: Approx. 770 g
Dimensions (incl. viewfinder)	:	GR-AX400: 112 (W) x 112 (H)x 220 (D)mm GR-AX350: 112 (W) x 112 (H)x 209 (D)mm

CAMERA

Pick up	:	1/4"-format CCD
Minimum required illumination	:	3 lx (F1.6)
Illumination range	:	3 to 100,000 lx
Lens	:	F1.6, f = 4.2 to 50.4 mm, 12:1 power zoom lens with auto iris and macro control, filter diameter 43 mm
Viewfinder	:	Electronic viewfinder with • 0.55" colour LCD (GR-AX350) • 0.5" black/white CRT (GR-AX400)
White balance adjustment	:	Auto/Manual adjustment

VIDEO

Output	:	1 Vp-p, 75 ohms, unbalanced (via VIDEO out connector)

AUDIO

Output	:	–8 dBs, 1 k-ohm (via AUDIO out connector)

AC POWER ADAPTER/BATTERY CHARGER (AA-V11EG) SPECIFICATIONS

Power requirement	:	AC 110 to 240 V~, 50/60 Hz
Power consumption	:	23 W
Output	:	DC 8.5 V⎓, 1.3 A (CHARGE), DC 6.3 V⎓, 1.8 A (VTR)
Charging system	:	Constant current, peak detection, timer controlled
Dimensions	:	150 (W) x 42 (H) x 68 (D) mm
Weight	:	Approx. 350 g

CASSETTE ADAPTER (C-P7U) SPECIFICATIONS

Dimensions	:	188 (W) x 25 (H) x 104 (D) mm
Weight	:	Approx. 240 g
Accessory	:	"R6 (AA)"-size battery x 1

For provided accessories, ☞ P. 3
For optional accessories, ☞ P. 36

E.&O.E.Design and specifications subject to change without notice.

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March 1995

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The following table lists the differing points between Models (GR-AX200EG, GR-AX350EG and GR-AX400EG) in this series.

	GR-AX200EG	GR-AX350EG	GR-AX400EG
AUTO PAUSE SWITCH	×	×	○
DC LIGHT	×	×	○
INTEL. FUNCTION CTL LCD	×	×	○
VIEWFINDER	BLACK/WHITE	COLOUR	BLACK/WHITE

○ : USED × : NOT USED

Important Safety Precautions

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

● Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the ⚠ symbol and shaded (▒) parts are critical for safety.
   Replace only with specified part numbers.
   Note: Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

3. Fuse replacement caution notice.
   Caution for continued protection against fire hazard.
   Replace only with same type and rated fuse(s) as specified.

4. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads

5. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers
   4) Insulation sheets for transistors
   5) Barrier

6. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

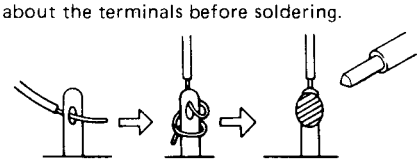


Fig. 1

7. Observe that wires do not contact heat producing parts (heat-sinks, oxide metal film resistors, fusible resistors, etc.)

8. Check that replaced wires do not contact sharp edged or pointed parts.

9. When a power cord has been replaced, check that 10–15 kg of force in any direction will not loosen it.

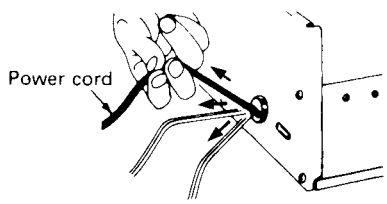


Fig. 2

10. Also check areas surrounding repaired locations.

11. Products using cathode ray tubes (CRTs)
    In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

12. Crimp type wire connector
    In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

    1) **Connector part number** : E03830-001
    2) **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.
    3) **Replacement procedure**
       (1) Remove the old connector by cutting the wires at a point close to the connector.
       Important : Do not reuse a connector (discard it).

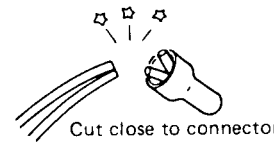


Fig. 3

(2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

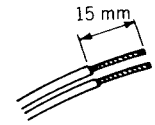


Fig. 4

(3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

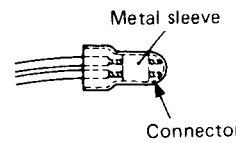


Fig. 5

(4) As shown in Fig. 6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

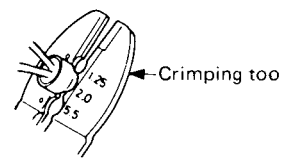


Fig. 6

(5) Check the four points noted in Fig. 7.

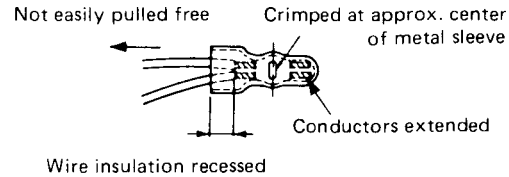

Not easily pulled free
Crimped at approx. center of metal sleeve
Conductors extended
Wire insulation recessed more than 4 mm

Fig. 7

● Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions, Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. Insulation resistance test

Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

2. Dielectric strength test

Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

3. Clearance distance

When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table 1 below.

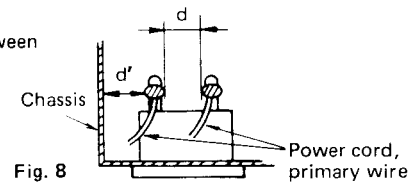


Fig. 8

4. Leakage current test

Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).

Measuring Method: (Power ON)

Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure 9 and following table 2.

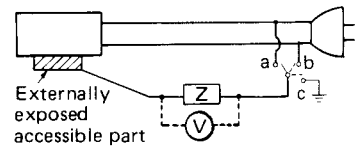


Fig. 9

5. Grounding (Class I model only)

Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).

Measuring Method:

Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See figure 10 and grounding specifications.

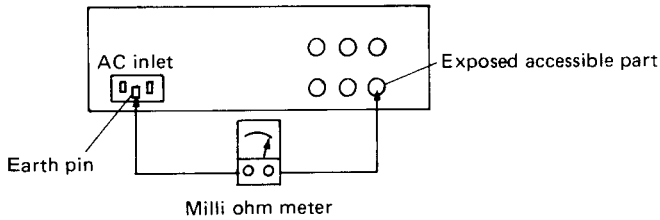


Fig. 10

Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	Z ≦ 0.1 ohm
Europe & Australia	Z ≦ 0.5 ohm

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	R ≧ 1 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3 mm
100 to 240 V			AC 1.5 kV 1 minute	d, d' ≧ 4 mm
110 to 130 V	USA & Canada	—	AC 1 kV 1 minute	d, d' ≧ 3.2 mm
110 to 130 V 200 to 240 V	Europe & Australia	R ≧ 10 MΩ /500 V DC	AC 3 kV 1 minute (Class II) AC 1.5 kV 1 minute (Class I)	d ≧ 4 mm d' ≧ 8 mm (Power cord) d' ≧ 6 mm (Primary wire)

Table 1 Specifications for each region

AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan	1 kΩ	i ≦ 1 mA rms	Exposed accessible parts
110 to 130 V	USA & Canada	0.15 μF, 1.5 kΩ	i ≦ 0.5 mA rms	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia	2 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Antenna earth terminals
		50 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Other terminals

Table 2 Leakage current specifications for each region

Note: These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

INSTRUCTIONS

Thank you for purchasing the JVC Compact VHS camcorder. Learn about all the available features and take advantage of them for your total moviemaking enjoyment. Before using this camcorder, read this instruction booklet carefully so that you will obtain the best results from your camcorder.

SAFETY PRECAUTIONS

WARNING:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

CAUTIONS:

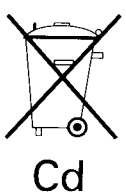
- To prevent shock, do not open the cabinet. No user serviceable parts inside. Refer servicing to qualified personnel.
- When you are not using the AC Power Adapter/Battery charger for a long period of time, it is recommended that you disconnect the power cord from AC outlet.

Warning on lithium battery

The battery used in this device may present a fire or chemical burn hazard if mistreated. Do not recharge, disassemble, heat above 100 °C or incinerate.
Replace battery with CR2025; use of another battery may present a risk of fire or explosion.

- Dispose of used battery promptly.
- Keep away from children.
- Do not disassemble and do not dispose of in fire.

Crossed Out Dust Bin Mark



- The Crossed Out Dust Bin Mark on the battery pack indicates that the product complies with Directives 91/157/EEC and 93/86/EEC.
- Nickel-Cadmium (Ni-Cd) battery pack must be recycled or disposed of properly.

This camcorder is designed to be used with PAL-type colour television signals. It cannot be used for playback with a television of a different standard. However, live recording is possible anywhere. Use the BN-V12U/V22U/V25U/V60U battery packs and, to recharge them, the provided multi-voltage AC Power Adapter/Charger. (An appropriate conversion adapter may be necessary to accommodate different designs of AC outlets in different countries.)

NOTES:

- The rating plate (serial number plate) and safety caution are on the bottom and/or the back of the main unit.
- The rating plate (serial number plate) of the AC Power Adapter/Battery Charger is on its bottom.

You are recommended to carefully read the cautions on page 38 and 39 before use.

CE mark on the rating plate declares that the product complies with Directives 89/336/EEC and 93/68/EEC.

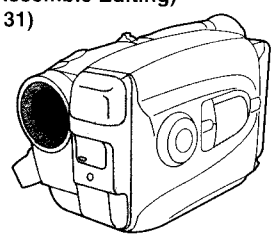
This unit is produced to comply with Standard IEC Publ. 65.

VHS C PAL HQ

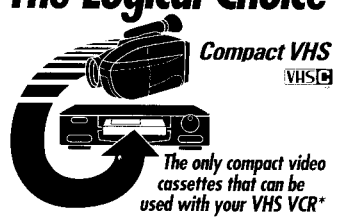
- Camcorder is designed exclusively for the VHS-C video cassette. Only cassettes marked VHS-C can be used with this unit.
- HQ VHS is compatible with existing VHS equipment.

MAJOR FEATURES

■ Programme AE with Special Effects (☞ P. 16) ■ Intelligent Function Control (☞ P. 17 – 21) ■ 12x Variable-Speed Hyper Zoom (☞ P. 14) ■ Design-Integrated Auto Light (GR-AX400 only, ☞ P. 15) ■ EasyEdit (Random Assemble Editing) (☞ P. 29 – 31)



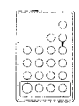
The Logical Choice



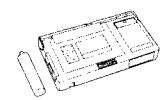
PROVIDED ACCESSORIES

AC power Adapter/Charger AA-V11EG (☞ P. 7, 8)

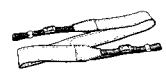
Battery pack BN-V12U (☞ P. 7, 8)



Remote control unit RM-V704U (GR-AX400 only, ☞ P. 6, 18, 23, 24, 29 – 33)



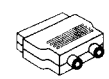
Cassette adapter C-P7U (☞ P. 25)



Shoulder strap (☞ P. 36)

Lithium battery CR2025 (☞ P. 6, 10)

Editing cable (☞ P. 31, 32)



Cable adapter (☞ P. 28, 31, 32)

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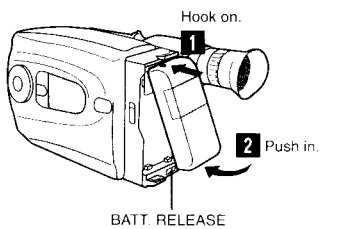
QUICK OPERATION GUIDE

SUPPLY POWER

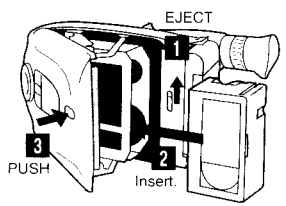


Using the battery pack

1 Hook-on the battery pack's top end to the camcorder. (Charging procedure, ☞ P. 8)
2 Push in the battery pack until it locks into place.

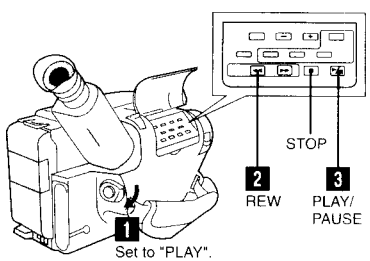
To remove the battery pack
Slide BATT. RELEASE and pull out the battery pack.

INSERTING A VIDEO CASSETTE



1 Slide EJECT.
2 Insert a video cassette.
3 Press PUSH.
(For more details, ☞ P. 11.)

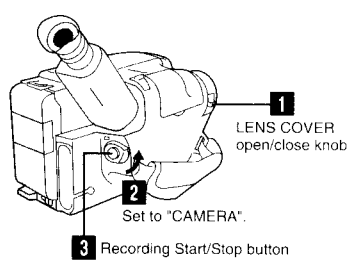
PLAYBACK



1 Set the power switch to "PLAY".
2 Press REW.
— The tape will automatically stop at the beginning of the tape.
3 Press PLAY/PAUSE.
— Playback starts and playback picture appears in the viewfinder.
■ To stop playback, press STOP.
(For more details, ☞ P. 26.)

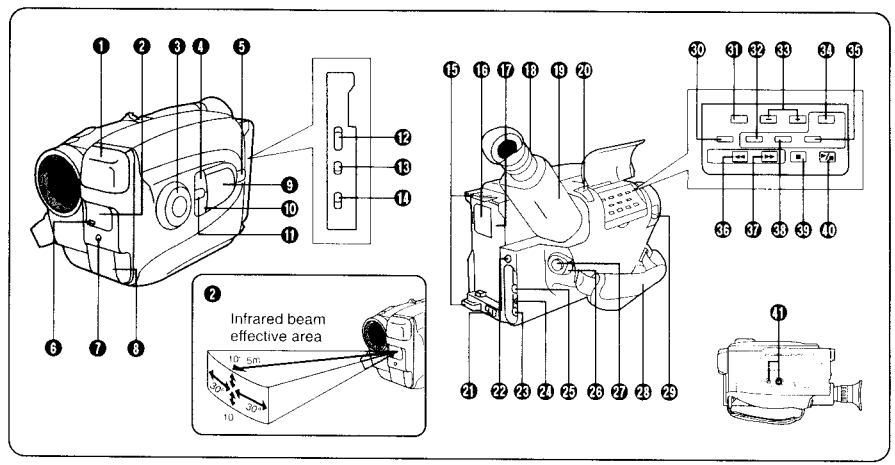
■ Or simply play back the tape on a VHS VCR using the Cassette Adapter. ☞ P. 25

SHOOTING



1 Slide the LENS COVER open/close knob to open the lens cover.
2 Set the power switch to "CAMERA".
— The power indicator will light and image will be seen in the viewfinder.
3 Press the Recording Start/Stop button.
— Recording starts.
■ To stop recording temporarily, momentarily press the Recording Start/Stop button once again.
(For more details, ☞ P. 12)

CONTROLS AND CONNECTORS



No. **Page**

❶ Video light (GR-AX400 only) 15, 34
❷ Infrared beam sensor window
Receives the transmitted beam signal from the remote control unit.
*The transmitted beam may not be effective or may cause misoperations when the infrared beam sensor window is directly exposed to sunlight or powerful lighting.
• Be careful not to cover this area; built-in here is the sensor necessary for shooting.
❸ PROGRAM AE select dial 16
❹ F1 (Function 1) button 17, 18, 21
For Fader, Focus and Titles.
❺ PUSH button 11
❻ Tally lamp 12
❼ REMOTE jack (capped)
For connection of the RM-V20U wired remote control unit (optional).
❽ Microphone
❾ LCD window (GR-AX400 only) 17
❿ F2 (Function 2) button 17, 19, 20
For Cinema, Exposure and Display.
⓫ Function SEL. (select) button 17
⓬ EJECT switch 11
⓭ AUTO PAUSE ON/OFF switch (GR-AX400 only) 13
⓮ LIGHT ON/AUTO/OFF select switch (GR-AX400 only) 15
⓯ Eyelets for shoulder strap 36
⓰ Clock battery compartment 10
⓱ Battery pack mount 7
⓲ Diopter adjustment 11
⓳ Electronic viewfinder 11, 35
⓴ Power zoom switch 14, 19
㉑ BATT. (battery) RELEASE switch 7

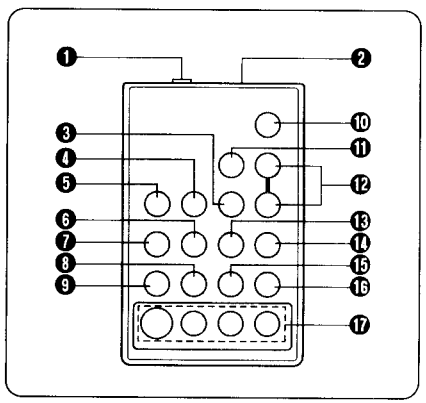
Connectors
The jacks ㉒ to ㉕ are located beneath the jack cover.
㉒ EDIT jack 31, 32
㉓ VIDEO out jack 28, 31, 32
㉔ RF DC OUT jack 28
For connection of the RF-V5E RF unit (optional).
㉕ AUDIO out jack 28, 31, 32
㉖ POWER switch 12, 26
㉗ Recording Start/Stop button 12
㉘ Grip strap 11
㉙ LENS COVER open/close knob 12, 34

Operation buttons
The buttons ㉚ to ㊵ are located beneath the cover.
㉚ MWB (Manual White Balance) button 22
㉛ TAPE 30·45 Tape length select/ COUNTER R (reset)/M (memory) button 11, 27
㉜ EDIT button 31, 32
㉝ DATE/TIME/CHAR. -/+ select/TRACKING buttons 10, 21, 26
㉞ DATE/TIME/CHAR. SET/IN/OUT button 10, 21, 30
㉟ R.A.EDIT button 30
㊱ REW/RETAKE R/⏪ (Quick Review) button 13, 26
㊲ FF/RETAKE F button 13, 26
㊳ CANCEL button 30
㊴ STOP button 26
㊵ PLAY/PAUSE button 26, 27

Bottom
㊶ Tripod mounting socket 36

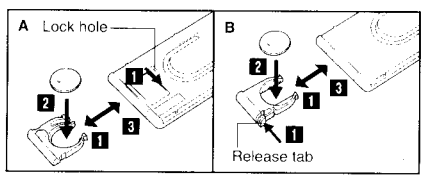
REMOTE CONTROL UNIT

The RM-V704U Full-Function Remote Control Unit can operate this camcorder from a distance as well as the basic operations (PLAY, STOP, PAUSE, FF, and REW) of your VCR. This remote control unit makes additional recording functions possible.
The RM-V704U is provided with GR-AX400, and is available optionally for GR-AX350.

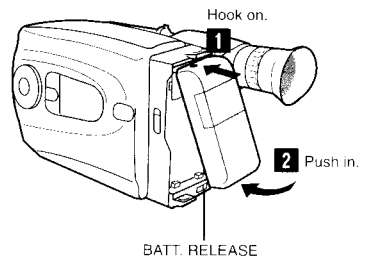


Inserting the battery

1 Pull out the battery holder according to the type of remote control unit you have.
Type A : Pull out the battrery holder while sliding the lock hole.
Type B : Pinch the release tab and pull out the battery holder.
2 Insert the lithium battery (CR2025), with its plus (+) side up, into the battery holder.
3 Replace the battery holder until it clicks in place.
*Read warning on lithium battery. (☞ P. 2)



Buttons	Functions	
	With the camcorder's power switch set to "CAMERA".	With the camcorder's power switch set to "PLAY".
❶ PAUSE IN connector	—	☞ P. 31
❷ Infrared beam transmitting window	Transmits the beam signal.	
❸ MBR SET button	—	☞ P. 29
❹ INT. TIME button	Self-Timer/Time lapse (☞ P. 23, 24)	—
❺ REC TIME button	Animation/Time lapse (☞ P. 24)	—
❻ FF button	Retake (Forward) (☞ P. 13)	FF/FF Shuttle Search (☞ P. 26, 27)
❼ REW button	Retake (Rewind) (☞ P. 13)	Rew/Rew Shuttle Search (☞ P. 26, 27)
❽ PAUSE button	—	Pause (☞ P. 27)
❾ PLAY button	—	Playback start (☞ P. 26)
❿ START/STOP button	Functions same as the Recording Start/Stop button of the camcorder.	
⓫ VISS button	Index code marking (☞ P. 14)	—
⓬ ZOOM (T/W) buttons	Zoom (invariable speed, ☞ P. 14)	—
⓭ VCR CTL button	—	☞ P. 29
⓮ A. DUB button	—	Audio dubbing (☞ P. 33)
⓯ STOP button	—	Stop (☞ P. 26)
⓰ INSERT button	—	Insert Editing (☞ P. 33)
⓱ R. A. EDIT buttons	—	☞ P. 30

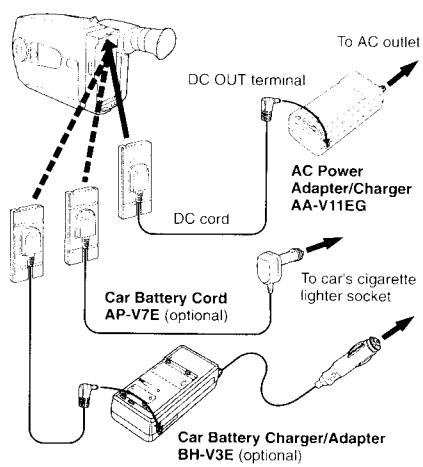


Approximate recording time

	GR-AX400	GR-AX350
BN-V12U	65 min. (40 min.)	60 min.
BN-V22U	135 min. (85 min.)	130 min.
BN-V25U	180 min. (110 min.)	170 min.
BN-V60U	135 min. (85 min.)	130 min.

( ): when the video light is on

- The recording time per charge is influenced by the duration of the recording standby, frequency of zooming, etc. It is safer to have spare battery packs.



The convenient 3-way power supply system gives you a choice of the most appropriate power supply unit, depending on the application.

- No function is available without power supply.
- Do not use any power supply other than specified.
- Never attempt to use these power supply units with any equipment other than the camcorder.
- The provided AC Power Adapter/Charger features automatic voltage selection in the AC range from 110 V to 240 V.

WITH BATTERY PACK

The battery pack has been kept in the uncharged state for shipment. Therefore, before use, be sure to charge it. (☞ See next page.)

Attaching the battery pack

1 Hook-on the battery pack's top end to the camcorder. (Charging procedure, ☞ P. 8)
2 Push in the battery pack in until it locks into place.

To remove the battery pack

Slide BATT. RELEASE and pull out the battery pack.

WITH AC POWER

Use the AC Power Adapter/Charger.

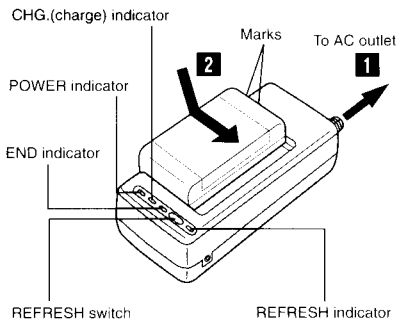
Note:
This unit can be used with 110 V to 240 V power supplies. Selection is automatic and no adjustment is required.

IN A CAR

Use the Car Battery Cord or Car Battery Charger.

- Leave the car's engine idling when using the car battery.
- The battery pack can also be recharged with the BH-V3E.
- Refer to the instruction booklet of the BH-V3E (for use with 12 V or 24 V negative grounded cars only) and the AP-V7E (for use with 12 V negative grounded cars only).

(Continued on next page.)



	Charging time	Discharging time
BN-V12U	approx. 70 min.	approx. 210 min.
BN-V22U	approx. 130 min.	approx. 420 min.
BN-V25U	approx. 160 min.	approx. 600 min.
BN-V60U	approx. 130 min.	approx. 420 min.

- The diagrams above indicate the approximate charging and discharging times of battery packs that are fully charged.
- Charging time and discharging time will vary depending on the ambient temperature and the status of the battery pack.

POWER SUPPLY SYSTEM (cont'd)

CHARGING/DISCHARGING THE BATTERY PACK

Charging the battery pack

1. Connect the AC power cord to a wall outlet.
   — The power indicator lights.
2. Align marks and slide the battery pack in the direction of the arrow until it locks in place.
   — The CHG. indicator lights.
   — When charging has been completed, the END indicator will light.
3. Slide the battery pack in the opposite direction of the arrow.

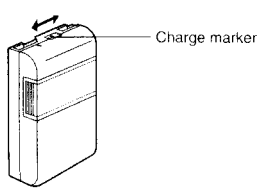
Using the REFRESH feature

The REFRESH feature on the AC power adapter allows you to completely discharge the power from the battery pack before charging. After charging the battery pack several times, the actual battery operating time will gradually decrease. For this reason it is recommended to use the REFRESH feature only after every 5 charges.

1. Attach the battery pack to the adapter as illustrated above.
2. Push REFRESH.
   — The REFRESH indicator will light and discharging will begin.
   — After discharging is completed, the indicator will go off.

CHARGE MARKER ON THE BATTERY PACK

Located on top of the battery, this marker is convenient for reminding you of the battery's charge status. Decide for yourself which marker colours — red and black — will represent charged and discharged.



■ **"Battery charged" — RED**
After charging (as soon as charging is completed), set this marker so that red appears.

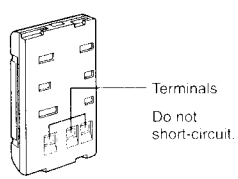
■ **"Battery discharged" — BLACK**
Upon detaching the discharged battery from the camcorder, set this marker so that black appears.

CAUTION
This marker does not move automatically. Make sure that the marker is properly set to accurately indicate the battery's charge status.

Notes:

- Do not repeatedly recharge a battery pack without fully discharging it. Its service life will decrease. Use the REFRESH feature after every 5 charges.
- Even if a battery pack is fully charged, but is not used, it naturally discharges gradually. Be sure to recharge the battery pack just before using it, or the day before you intend to use it.
- This unit is normally warm during operation. Operate it in places having good ventilation. Do not allow it to discharge in a container, such as a bag, etc. Blocking the ventilation causes the temperature inside the unit to rise, possibly resulting in a damaged unit.
- If either recharging or discharging is stopped in the middle of the process, remove the battery pack before unplugging the AC cord.
- This unit incorporates an over-discharging protection circuit; however, immediately remove the battery pack from this unit after discharging has been completed to maintain the battery pack's capacity.
- If used near a radio, the AC Power Adapter/Charger may interfere with reception.
- Be sure to unplug the DC cord before charging or discharging the battery pack.
- Before storing the battery pack for a long period it is recommended to discharge it.
- The REFRESH feature will not function if the power status of a battery pack is discharged (No power remaining).
- When the CHG.indicator is blinking, the battery pack has become hot. Wait for a while for the battery pack to cool.
- With a just-purchased battery pack, or with a battery pack that has been stored for a long period, the CHG. indicator may not light properly. In such a case, remove and reattach the battery pack again, then do the recharging procedure. The CHG. indicator should light during recharging to indicate, the battery pack is normal. If this is not the result, consult your nearest JVC dealer.

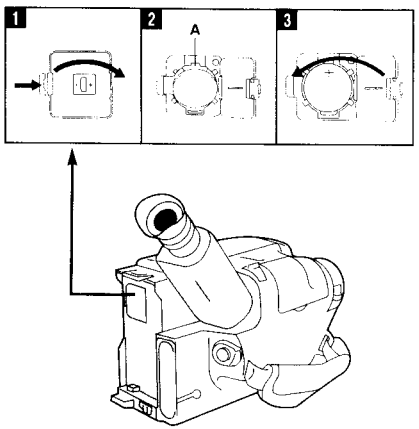
The battery packs are nickel-cadmium batteries. Be sure to carefully read the following caution. When using an optional battery pack, please also read attached caution.

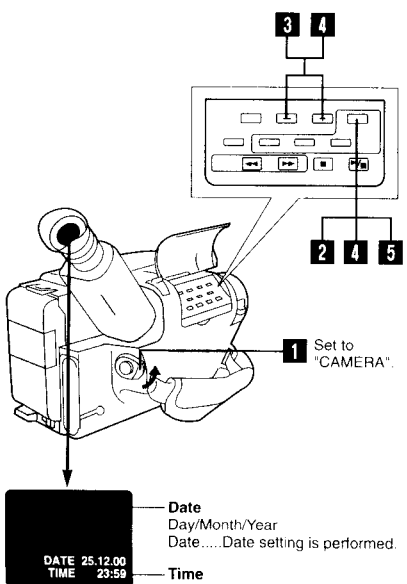


Temperature ranges:
The recharging time is based on room temperature of 20°C.
The lower the temperature, the longer the recharging time.

For charging: 10°C to 35°C
For operating: 0°C to 40°C
For storing: −10°C to 30°C

- **To avoid hazard:**
  - Do not burn.
  - Do not short-circuit the terminals.
  - Do not modify or disassemble.
  - Use only specified chargers.
- **To prevent damage and prolong service life:**
  - Avoid dropping, unnecessary shocks.
  - Avoid repeated charging without discharging.
- **This unit has a limited service life:**
  Near the end of its service life, when it begins to deliver less recording time per charge, purchase a replacement.
- **It is normal for the unit to be warm after charging or use.**
- **This is a chemical reaction type battery; its properties are best maintained under the following conditions:**
  - Optimum charging takes place at temperatures between 10°C and 35°C. Cooler temperatures impede chemical reaction. Warmer temperatures can prevent complete charging.
  - Store in a cool dry place. Extended exposure to high temperatures will increase natural discharge and shorten service life.
  - Total natural discharge may occur during long storage periods. (Uncharged storage is preferable; recharge one day before use.)
  - Remove from charger or powered unit when not in use; some machines use current even when switched off.





CLOCK (LITHIUM) BATTERY

Necessary for clock and date/time settings.

* Switch off the unit's power and remove the power supply unit before inserting or removing the clock battery.

1 Open the clock battery compartment cover while pressing the release tab.
2 Insert the provided lithium battery with the plus (+) side up and push it in.
   * When removing the battery, insert a pointed non-metallic object between the battery and the compartment (A) to pull it out.
3 Close the compartment cover until it clicks in place.

Warning on lithium battery

- Dispose of used battery promptly.
- Keep away from children.
- Do not disassemble and do not dispose of it in fire.

(See Warning on lithium battery, ☞ P. 2)

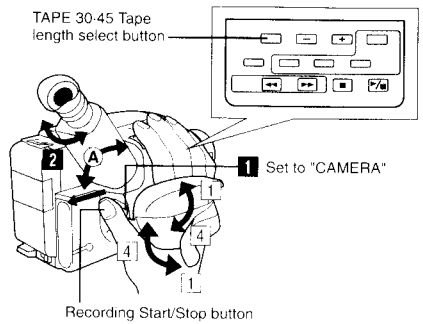
[illegible]

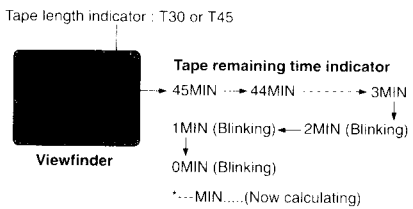
Before adjusting the date and time for the first time or after replacing the clock battery.

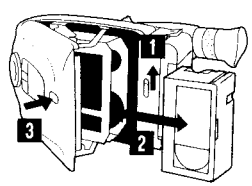
1 Set the power switch to "CAMERA".
2 Press SET. — The day blinks.
3 Press – or + to choose the correct day.
4 Repeat steps 2 and 3 to set the month, year, hour and minute.
5 Press SET to start the clock.
   — Now that the setting is completed, blinking stops. Both the date and time will be displayed for confirmation, after which the date remains displayed by itself.

Notes:

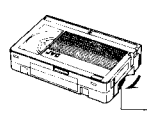
- While the date or time are blinking, the clock does not keep time.
- When re-adjusting the data, press SET and –/+ to correct them. After adjustment is completed, both the date and time appear for confirmation, then the display returns to the mode before correcting.
- When PROGRAM AE is set to "LOCK" (☞ P. 16), the date and time are displayed immediately after adjustments, after which the display automatically changes to Auto Date record mode.(☞ P. 20)







Notes:



- Ensure that tape is not slack inside the cassette, then load the cassette correctly.
- Do not repeat loading and unloading of the cassette without running the tape, as this will slacken the tape, causing tape damage.
- The cassette holder can be opened even when the power is off.
- Sliding EJECT may open the cassette holder a few seconds later. Do not open the cassette holder by force.
- EJECT is not possible unless a power supply is attached.
- When remaining battery power is extremely low, EJECT may not be possible.

ADJUSTING THE GRIP

1 Separate the Velcro strip to expand the loop.
2 Pass your right hand through the loop and grasp the grip.
3 Adjust the length of the strap so that your thumb and fingers can easily manipulate the Recording Start/Stop button and power zoom switch.
4 Refasten the Velcro strip.

[illegible]

- **Positioning**
  The viewfinder can be positioned for best viewability (A).
- **Diopter adjustment**
  The viewfinder lens can be adjusted to suit the operator's eyesight.

1 Set the power switch to "CAMERA".
2 Turn the diopter adjustment control until the indications in the viewfinder are clearly focused.

[illegible]

The tape remaining time is displayed in the viewfinder as shown. Before shooting, press the tape length select button according to the tape being used.

- **T30:** When using a tape with 30-minute recording time or less.
- **T45:** When using a tape with recording time more than 30 minutes.

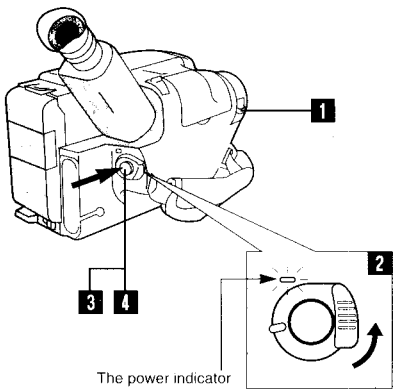
Notes:

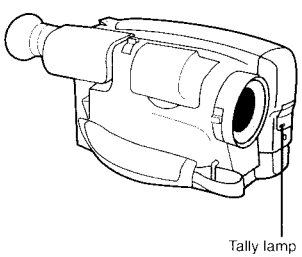
- The indicated remaining time is approximate.
- The time required to calculate the remaining tape length and accuracy of the calculation may vary according to the type of tape used.
- TAPE END" appears when the tape reaches its end. "TAPE END" also appears when a cassette is loaded whose tape is already at its end.

LOADING AND UNLOADING A VIDEO CASSETTE

1 Slide EJECT. — The cassette holder opens.
2 Insert/remove the cassette with its label facing outward.
3 Press PUSH and make sure that the cassette holder is closed and locked.

RECORDING OPERATION





SHOOTING

Preparations

- Supply power.(☞ P. 7.)
- Insert a video cassette correctly. (☞ P. 11.)
- Adjust the grip strap. (☞ P. 11.)

1. To enter the Record-Standby mode

1 Slide the LENS COVER open/close switch to open the lens cover.

2 Set the power switch to "CAMERA".
— The power indicator lights and the camcorder enters the Record-Standby mode.
The aimed-at scene will appear on the viewfinder screen.

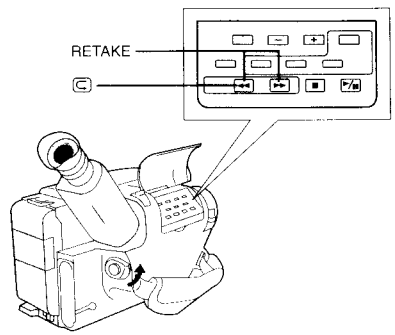
2. To shoot the scene

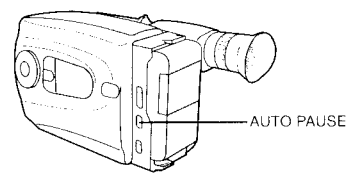
3 Press the Recording Start/Stop button to start recording.
— The tally lamp lights while the recording is in progress.

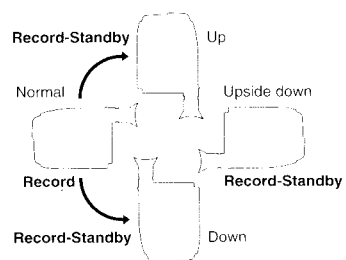
4 To stop recording temporarily. (To enter the Record-Standby mode)
Press the Recording Start/Stop button once again.
- To restart recording.
Press the Recording Start/Stop button.
- Repeating steps 3 and 4 produces assemble recordings.

Notes and Advice

- For a longer pause, set the power switch to "POWER OFF" to save power.
- When a tape reaches its end during recording, "TAPE END" indicator will appear in the viewfinder and power itself off automatically if left for longer than 5 minutes.
- If the Record-Standby mode continues for longer than about 5 minutes, the unit switches itself off automatically. To restart recording, turn the power on and press the Recording Start/Stop button. This makes clean assembled recordings possible even after a long pause.
- When turning off the camcorder with the power switch set to "CAMERA", be sure to set the switch to "POWER OFF" first. Then set it back to "CAMERA" to turn on the camcorder again.
- When recording with a cassette that has been removed from the unit in the middle of use, first re-locate the end of the last recording (i.e. the point that you want to start recording from) by using the Retake function (☞ P. 13) after re-inserting the cassette. Otherwise, the end of the last recording may be erased.
- *Lens cover warning blinks for approx. 5 seconds, whether the lens cover is open or closed, everytime the unit is turned on. It lets the user check to see if the cover is open.* (☞ P. 35)







QUICK REVIEW

If you want to review the end of the last recording for confirmation, use this function.

- Press C for less than 2 seconds from the Record-Standby mode.
— The tape will be rewound for about 2 seconds of program time and played back automatically for this section, after which it will pause in the Record-Standby mode for the next shot.

While recording, you may decide to re-record certain segments. The Retake function is convenient for this.

1 Make sure the camcorder is in the Record-Standby mode. (If not, engage the mode.)

2 Press either RETAKE to reach the point where you wish a new recording to start.
- When RETAKE is released, the camera will enter the Record-Standby mode again.

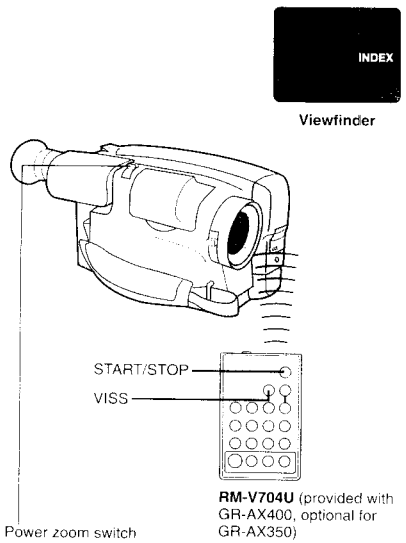
3 Press the Recording Start/Stop button.
— Recording starts.

With the Auto Pause system, the camcorder automatically stops recording when it is pointed down. This function prevents shooting the ground, your feet, etc. by mistake.

- Set AUTO PAUSE to "ON".
— When the camcorder is tilted down by a large degree from its horizontal position during recording, it will automatically enter the Record-Standby mode, and the "AUTO PAUSE" indication will appear in the viewfinder.
— Pressing the Recording Start/Stop button resumes recording.
- The Auto Pause system is also effective when the camcorder is pointed up or upside down.
- This system is also effective about a large degree twist to the left or right side from the horizontal position.
- To shoot in any of the above mentioned positions,set AUTO PAUSE to "OFF".

Notes and Advice

- Distortion might occur when playback starts in the Quick Review mode. This is normal.
- Noise may appear during Retake. This is normal.



INDEX CODE IN VISS

The VHS Index Search System (VISS) gives you automatic access to any point you select on a recording. Only the marking aspect of the Index Search System is included in this unit. It allows index codes to be placed on recorded tape for convenient dubbing or editing on VCRs with an Index Search function.

Auto marking

An index code is always marked at the beginning of the first recording after the date advances and a cassette is inserted.

— "INDEX" blinks while marking.

Manual marking

The RM-V704U remote control unit allows index codes to be marked in any desired position.

1 Press VISS once to put an index code onto the tape.

— "INDEX" blinks during the marking process.

- If VISS has been pressed in the Record-Standby mode, an index code is put at the point where START/STOP is pressed.

POWER ZOOM

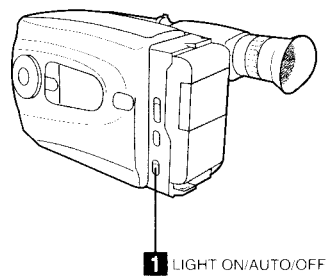
Pushing up/pulling down the power zoom switch ("T" and "W") will vary the focal length of the lens.

Procedure

- Pulling down to T : Zoom in on the image (bring it nearer).
- Pushing up to W : Zoom out.
- Zooming speed is variable. The further the switch is pulled down or pushed up, the faster the zoom speed becomes.

Notes and Advice

- Focusing may become unstable during the zooming-in operation. In this case, first zoom in in the Recording Standby mode then, after using the manual focusing or the Focus Lock function (☞ P. 18, 19) to hold the focus fixed, zoom in or out in the Record mode.
- When shooting low-contrast subjects in the Zoom-in mode, the camcorder automatically zooms out with the low contrast indicator (☞ P. 18) blinking and focus being performed.
- Auto marking also takes place when the date changes while shooting. In this case, the first recording after that does not mark an index code at its beginning.



LIGHTING — To apply more light to the [illegible]

When natural lighting is too dim, you can brighten the scene by using the built-in video light.

1 Set the LIGHT ON/AUTO/OFF as required.

ON : Always keeps the light on as long as the camcorder is turned on.

AUTO : Automatically turns on the light when the camcorder senses insufficient lighting on the subject.

OFF : Turns off the light.

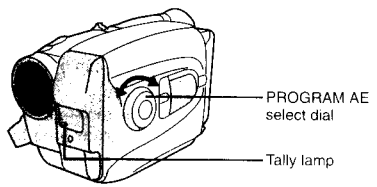
- The video light can be used with the camcorder's power on.
- It is recommended to set the white balance to indoor mode (☀) (☞ P. 22) when you use the video light.
- When not using the video light, turn it off to save battery power.

CAUTIONS:

- The video light becomes extremely hot. Do not touch it either while in operation or soon after turning it off, otherwise serious injury may result.
- Do not place the camcorder into the carrying case immediately after using the video light, since it remains extremely hot.
- When operating, keep a distance of about 30 cm between the video light and people or object.
- Do not use near flammable or explosive materials.

Notes and Advice

- Even if the battery indicator (▭) does not blink in the viewfinder, if the battery pack's charge is low, the camcorder may turn off automatically when you turn on the video light, or when you start recording with the video light turned on.
- When the LIGHT ON/AUTO/OFF is set to "AUTO":
  - Depending on the lighting condition, the video light may not be stably turned on or off. In this case, switch the light on or off manually.
  - While the Sports or High-Speed Shutter mode (☞ P. 16) is engaged, the light is likely to stay on.
  - While the Twilight mode (☞ P. 16) is engaged, the light will not activate.



PROGRAMME AE WITH SPECIAL EFFECTS

A variety of creative shooting effects are accessible with the PROGRAM AE select dial.

To engage any of the effects:

Turn the PROGRAM AE select dial so that the desired indication appears in the viewfinder.

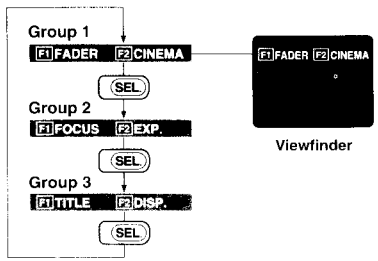
— The chosen mode is activated approx. 1 second later.

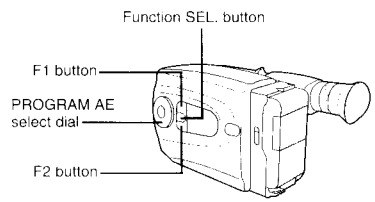
Symbol on the PROGRAM AE select dial (Mode)	Viewfinder indication*	What it does/when to use
LOCK (Auto Mode Lock)	A AUTO LOCK	Setting to this mode locks the camcorder in the Full Auto mode, eliminating the possibility of misoperation by accidentally touching the following buttons while shooting. It is convenient when asking someone else to do the shooting. **These controls cannot be used in this mode:** CINEMA, FADER, FOCUS, EXPOSURE, DISPLAY, TITLES, MWB.
RELEASE (Auto Mode Release)	M AUTO RELEASE	Lets you use the controls that were inactive in the Auto Mode Lock mode.
(Portrait Frame)	PORTRAIT FRAME	The centre of the picture remains clear while towards the outer edges the screen is gradually rimmed in white. This mode is useful to emphasize the subject positioned in the centre of the screen.
(Spotlight)	SPOT LIGHT	The screen shades off to black towards the edges, for a visual effect that looks like the subject is being lit by a spotlight.
(Sepia)	SEPIA	The scene being shot will be recorded in sepia-tinted (reddish brown) monochrome, making it look like an old movie. By using it in combination with Cinema mode (☞ P. 17), you can recreate the authentic look of a classic Hollywood movie.
(Twilight)	TWILIGHT	Disengages the auto gain control and auto focus, and automatically locks the focus to infinity and white balance to ● (outdoor) mode. Dusk and twilight scenery, fireworks, etc. look more natural and dramatic. ■ Manual adjustment of white balance (☞ P. 22), and focus (☞ P. 19) is possible. ■ Re-engaging the auto focus mode is possible. (☞ P. 19)
(Sports)	SPORTS	Uses high shutter speed to clearly capture fast-moving action with less blur. Clarity is especially noticeable during slow motion playback on a video deck. Great for sports, races, etc.
1/2000 (High Speed (1/2000 sec.) Shutter)	S 1/2000	This mode sets the shutter speed to 1/2000 sec. to clearly capture fast-moving action with less blur. Clarity is especially noticeable during slow motion playback on a video deck. Great for sports (i.e., golf swing), races, etc. This mode can capture faster action than the Sports mode can.
(15 sec. Self Timer)	SELF TIMER	This mode lets you delay the start of recording after the Recording Start/Stop button has been pressed. If the camcorder has been secured, the operator can enter the picture before actual recording begins. ■ When performing Self-Timer shooting, the tally lamp blinks, and its blinking speed becomes faster approx. 5 sec. before recording begins. Then when recording starts, the lamp lights normally to indicate recording is in progress.

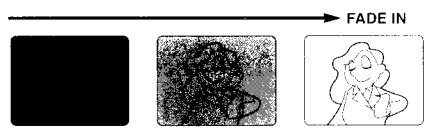
* When the PROGRAM AE select dial is switched from one mode to another, the newly selected mode's name and its indication is displayed in the viewfinder for approx. 3 seconds. Then the name disappears, and only the indication remains.

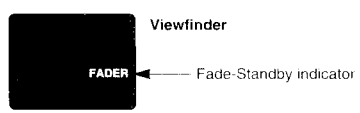
Notes and Advice

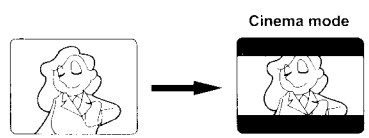
- Only one Special effect can be activated at a time.
- Picture colour may be adversely affected in the High-Speed Shutter or Sports mode when the subject is lit by alternating discharge-type light sources such as fluorescent or mercury-vapour lights.











INTELLIGENT FUNCTION CONTROL

When using the following functions:

Fader, Cinema mode, Manual focus adjustment, Exposure control, Display mode, Instant Title

1. Set the PROGRAM AE select dial to any position except LOCK.
2. Press Function SEL. so that the required function's indication appears in the viewfinder.
3. Press either F1 or F2 button.
   - The function displayed on the right of F1: F1 button
   - The function displayed on the right of F2: F2 button

   (For more details, ☞ P. 17 - 21)

[redacted]

This camcorder incorporates a fader function which allows smooth video fade-in and fade-out to a black blank screen.

Fade-in functions when the recording starts, and fade-out functions when the recording stops (and the Record-Standby mode is engaged.)

1. Press Function SEL. until "FADER" appears beside "F1".
2. Press F1 button.
   — The Fade-Standby mode is engaged.
   — "FADER" appears in the viewfinder.
3. Press the Recording Start/Stop button.
   — Fade-in/out functions.

[redacted]

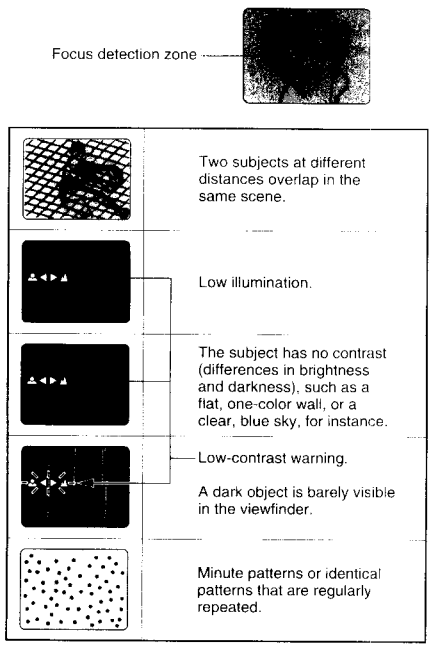
This camcorder incorporates a "Cinema" mode recording function which allows you to record black bars at the top and bottom of the screen to produce a cinema-like "wide-screen" effect.

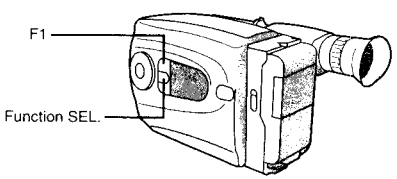
1. Press Function SEL. until "CINEMA" appears beside "F2".
2. Press F2 button.
   — The Cinema mode is engaged.

- To restore the normal screen:
  Press F2 button again while "CINEMA" is displayed beside F2 in the viewfinder.

Notes and Advice

- Setting the PROGRAM AE select dial to "LOCK" causes the F1 F2 indicators in the viewfinder to vanish (the Intelligent Function Control becomes unavailable.) When the dial is switched to any other position, the Group 1 indicators (F1 FADER F2 CINEMA) are restored.
- With the Portrait Frame mode (☞ P. 16) engaged, the image fades in/out to a white screen.
- Using the Fader along with the Portrait Frame mode or Spotlight mode (☞ P. 16) adds a pro-style look to the picture.
- Keeping the Recording Start/Stop button pressed as long as required in the Fader mode allows the user to record a black blank screen.
- The screen will become slightly reddish when the Fader is used in the Sepia mode. (☞ P. 16)


Focus detection zone
Two subjects at different distances overlap in the same scene.
Low illumination.
The subject has no contrast (differences in brightness and darkness), such as a flat, one-color wall, or a clear, blue sky, for instance.
Low-contrast warning.
A dark object is barely visible in the viewfinder.
Minute patterns or identical patterns that are regularly repeated.



FOCUSING

Auto-focus

The camcorder's Full Range AF system can offer continuous shooting ability from close-up to infinity. The rectangular focus area detects focus. (No actual indication provided in the viewfinder.)

- Correct focus may not be obtained in these situations on the left. In such case manual focusing should be performed to obtain proper focus.

Focus lock

This camcorder's focus lock function is especially useful in the following situations:

- When things pass between your subject and the camcorder, make sure to engage the focus lock function, to lock your subject in focus before recording.
- If you want your main subject to appear in a corner of the screen, you should first centre it at the desired distance, then use the auto focus mode for focusing, engage the focus lock function, and move the camcorder till the subject is where you want it.

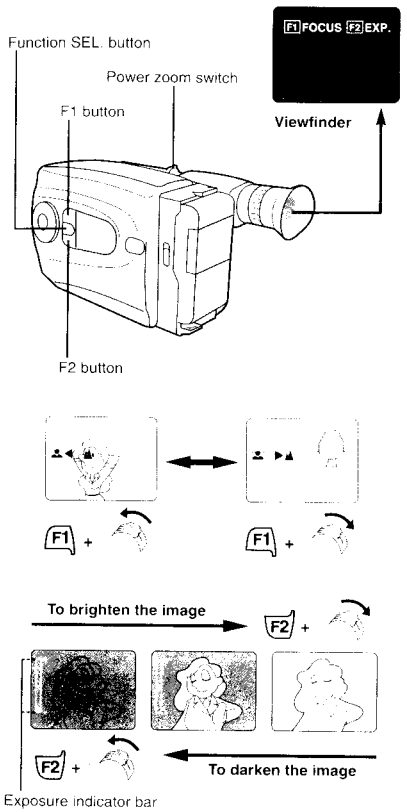
To lock the focus:

1. Press Function SEL. until "FOCUS" appears beside "F1".
2. Press F1.
   — The focus lock indication (◄►) appears in the viewfinder.

To release the focus lock mode
(To engage the Auto Focus mode):
Press F1. At the moment when the button is released, the focus lock mode is canceled.
— FOCUS LOCK indication (◄►) disappears.

Notes and Advice

- If the lens is smeared with stains or blurred with condensation, accurate focusing is not possible. Keep them clean. If they become dirty, wipe with a piece of soft cloth. When condensation occurs, dry them by wiping with a soft cloth or wait for conditions in which they become dry.
- The Focus Lock function is not available when PROGRAM AE is set to "LOCK". (☞ P. 16)
- When shooting a subject that is close to the lens, zoom out first (☞ P. 14). If zoomed-in in the auto-focus mode, the camcorder could automatically zoom out depending on the distance between the camcorder and the subject.



Manual focus

For manual focus operation, proceed as follows:

1. Press Function SEL. until "FOCUS" appears beside "F1".
2. Slide the power zoom switch (to "T" or "W") with F1 button pressed.
   - **To adjust the focus to a farther subject:**
     Slide to T. The Manual Focus indications (▲ ▶▲) appear, and ▶ blinks.
   - **To adjust the focus to a closer subject:**
     Slide to W. The Manual Focus indications (▲◄ ▲) appear, and ◄ blinks.
   - Two manual focusing speeds are available. For slow-speed, push/pull the switch slightly and hold that position. For fast-speed, push/pull the switch fully.
   - When the focus level cannot be adjusted any farther or closer, the indicator (▲) or the indicator (▲) will blink.
3. When finished with focus adjustment, release the power zoom switch.
   — The Focus indication (◄ or ▶)disappears, and the focus lock indication (◄►) appears. The adjusted focus is locked in.

- **To release the Manual Focus mode** (to engage the Auto Focus mode):
  Press F1. At the moment when the button is released, the Manual Focus mode is canceled.
  — FOCUS LOCK indication (◄►) disappears.

This camcorder offers automatic adjustment of iris to provide the best available picture quality, but this can be overidden in cases when manual control of iris is desired.

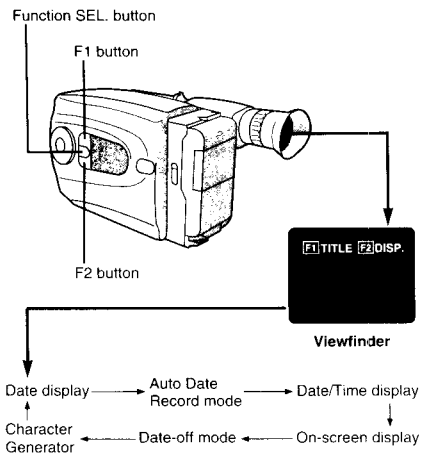
1. Press Function SEL. until "EXP." appears beside "F2".
2. Slide the power zoom switch ("T" or "W") with F2 button pressed.
   — The Exposure indicator bar appears in the viewfinder.
   - To brighten the image: Slide to T.
   - To darken the image: Slide to W.

- To restore the initial standard setting:
  Press F2. At the moment when the button is released, the standard setting is restored.
  — The Exposure indicator bar disappears.

Notes and Advice

- When you use the Manual Focus mode, be sure to focus the lens in the maximum telephoto position. If you focus in on a certain subject in the wide-angle position, sharply-focused images cannot be obtained when zoomed up because the depth- of-field is reduced at longer focal lengths.
- When focusing manually, make neccessary viewfinder adjustments (☞ P. 11), then focus in.
- Manual Focus operation and Exposure control are not available when PROGRAM AE is set to "LOCK". (☞ P. 16)
- With the Group 2 functions (F1: FOCUS, F2: EXP.(osure), ☞ P. 17) selected, the power zoom switch is ineffective while F1 or F2 button is kept pressed.

ADVANCED VIDEOGRAPHY TECHNIQUES (Cont'd)



Date display	Auto Date Record mode	
25.12.95	AUTO DATE	25.12.95
	Auto date record mode	Auto date record executed
Date/Time display	**Character Generator**	
25.12.95 10:50	SET CHAR	IN PARIS, FRANCE
	No Characters stored	Example of stored characters

DATE/TIME CHARACTER INSERT

Select the display mode

The date/time/character can be displayed and recorded according to the selected mode.

1. Press Function SEL. until "DISP." appears beside "F2".
2. Press F2 while in the Record-Standby mode to cycle through the modes in the order shown on the left.

Recording the display

The selected display mode can be recorded.

- When no display is needed on the recorded tape, select Date-off mode before shooting.
- To delete the display during recording, press F2.
  - If the display is to be called back on the screen, put the camcorder into the Record-Standby mode first. Then press F2 to select the desired mode.

Auto Date Record function

These functions allow the date (month, day and year) to be automatically recorded for about 5 seconds following the first operation of the Recording Start/Stop button:

= after changing the date,
= after a cassette is loaded, or
= after its mode is selected by F2.

- In the Auto Date Record mode, the viewfinder indication shows the date during the initial 5 seconds, then changes to "AUTO DATE".

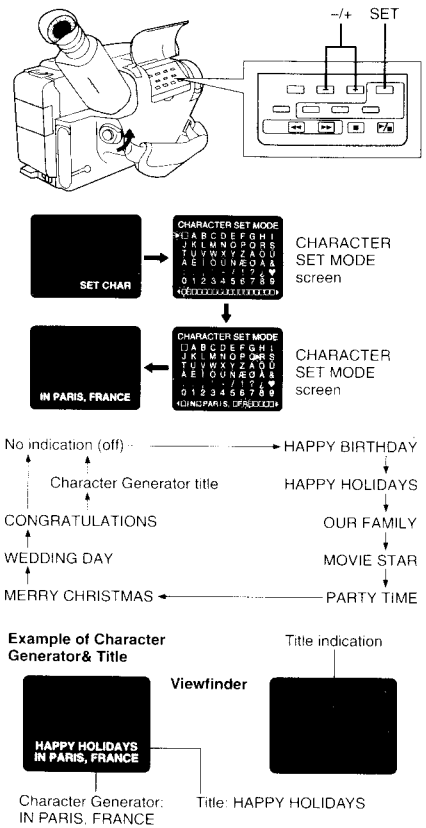
On-Screen Display Mode

The viewfinder indications can also be displayed on the screen of a monitor connected to the camcorder.

- Connect the camcorder to a video monitor. Press F2 until the viewfinder indications appear on the monitor screen.
- In the On-Screen Display mode, the date will be displayed and recorded.
- The on-screen display is not available during recording.

Notes and Advice

- The date/time/character display is available only after the date/time setting has been completed. (☞ P. 10)
- Setting PROGRAM AE to "LOCK" always engages the Auto Date record mode. (☞ P. 16) In this case, no other display modes are available.
- In Auto Date Record mode, the date indication is also recorded for approx. 5 seconds when the date changes while shooting. In this case, the first recording after that does not record the date indication at its beginning.



Character Generator

You can make your own title, store it in advance and superimpose it over the scene being shot.

How to store:

1. Press Function SEL. until "DISP." appears beside "F2".
2. Press F2 until "SET CHAR" or a title you have stored earlier appears in the viewfinder.
3. Press SET.
   — CHARACTER SET MODE screen will appear in the viewfinder.
4. Press –/+ to move the cursor, and then press SET to choose the desired characters.
5. Repeat step 4 to set all needed characters.
   — After all the desired characters have been entered, press SET as many times to exit the character set mode. The CHARACTER SET MODE screen will disappear, and the stored characters will be displayed.

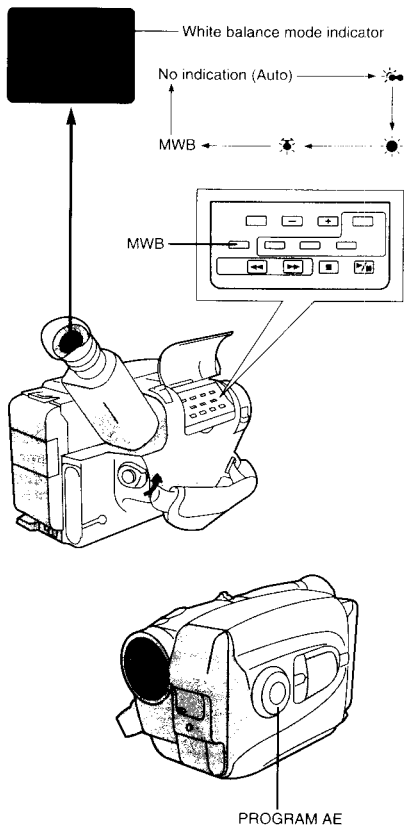
The camcorder has eight pre-set Titles in memory. One of them can be superimposed above the Character Generator's stored title.

1. Press Function SEL. until "TITLE" appears beside "F1".
2. Press F1 while in the Record-Standby mode as many times as required until the desired Title is displayed. The Title changes in the sequence shown on the left.

- To delete the Instant Title during recording, press F1.
  - If the title is to be called back on the screen, put the camcorder into the Record-Standby mode first. Then press F1 to select the desired title.
- A personal title stored in the Character Generator can be displayed in the same position as the Instant Title.
  - The Instant Title's function can be used along with the Character Generator mode; consequently, a pair of identical stored titles can be superimposed.

Notes and Advice

- Up to 18 characters can be stored.
- Only one personally input title created with the Character Generator can be stored at a time. To replace it with another title, proceed as above again.
- To create a space between two characters in your own title, choose "□" on the CHARACTER SET MODE screen in the process of title storing.
- The Instant Title cannot be displayed when PROGRAM AE is set to "LOCK". (☞ P. 16)



WHITE BALANCE ADJUSTMENT

This camcorder's Automatic Colour Temperature system senses the color temperature of the ambient lighting for automatic white balance adjustment. However, precise color temperature adjustment is not possible under the following conditions:

- The object is in various shades of the same colour.
- Predominantly red or brown object is being shot outdoors.

In these cases, use the camcorder's built-in preset filters for white balance adjustment.

To adjust the white balance:

Press MWB (Manual White Balance) so that the required indication appears in the viewfinder.

- ..... When you shoot in the daytime outdoors (cloudy day)
- ..... When you shoot in the daytime outdoors (sunny day)
- ..... When the source of illumination is a halogen or tungsten lamp.

MWB..... In the following situations.

How to use the MWB mode

In the MWB mode, the camcorder automatically adjusts the colour temperature of the subject's light source and keeps that colour temperature during shooting. When shooting some subjects with different colour temperatures, use the MWB mode to set a colour temperature and you can shoot with natural colours that are not affected by surroundings.

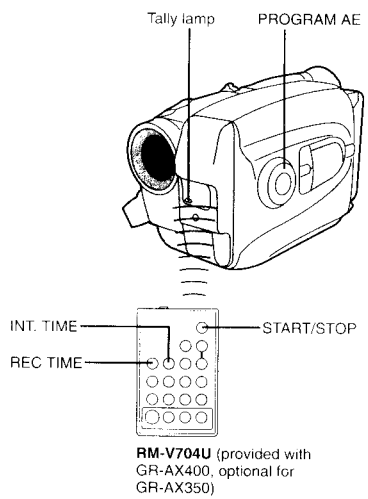
1. Press MWB until "MWB" appears in the viewfinder.
2. Point the camcorder at a white, flat object such as a sheet of white paper.
   Adjust focus manually. (☞ P. 19)
3. Keep MWB pressed for more than about 3 seconds.
   ❶ "MWB" blinks in the viewfinder..... During adjustment
   ❷ "MWB" is lit..... Adjustment is finished
   —The camcorder is now ready for shooting.

To switch to automatic adjustment:

Press MWB until the indication disappears, or turn the PROGRAM AE to "LOCK".

Notes and Advice

- Re-adjust the MWB mode in the following conditions:
  - When the lighting has changed.
  - When the camcorder has been turned off and on again.
  - When PROGRAM AE's position has been changed.
- Manual White Balance adjustment is not possible when PROGRAM AE is set to "LOCK". (☞ P. 16)
- It is helpful to connect your camcorder to a colour monitor when adjusting the white balance.



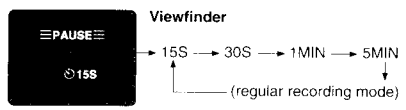
RM-V704U (provided with GR-AX400, optional for GR-AX350)

USING THE REMOTE CONTROL UNIT

Self-Timer

This Self-Timer function allows you to set the amount of time delay before recording starts after Start/Stop has been pressed. If the camcorder has been secured, the operator can enter the picture before actual recording begins.

1. Put the camcorder into the Record-Standby mode.
2. Press INT. TIME to select the interval time.
   —The following sequence of time setting is displayed with each press of INT. TIME:



3. Press START/STOP.
   - When the selected time has elapsed, recording begins automatically.
   - The tally lamp blinks, and its blinking speed becomes faster approx. 5 sec. before recording begins. Then when recording starts, the lamp lights normally to indicate recording is in progress.

To release the Self-Timer mode:

When the tally lamp is not blinking:

Press INT. TIME continuously until "⏲" goes off.

When the tally lamp is blinking:

Press Start/Stop to stop the blinking, then press INT. TIME continuously until "⏲" goes off.

(Continued on next page.)

Notes and Advice

- If the camcorder's PROGRAM AE is set to "⏲"(Self-Timer mode), the 15S mode will be selected. (☞ P. 16)

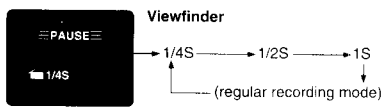
ADVANCED VIDEOGRAPHY TECHNIQUES (Cont'd)

USING THE REMOTE CONTROL UNIT (Cont'd)

Animation

The Animation function produces the illusion of movement in otherwise stationary scenes or objects. This technique is accomplished by shooting a series of slightly different pictures of the same scene or slightly different poses of the same object for a brief period of time.

1 Put the camcorder in the Record-Standby mode.
2 Press REC TIME to select the recording time.
— The following sequence of time setting is displayed with each press of REC TIME:



- If the camcorder's PROGRAM AE is set to "⏲" (Self-Timer mode), Animation will be cancelled and the camcorder will enter the Self-Timer 15S mode.

3 Press START/STOP after focusing on the subject.
- Recording stops automatically in the Record-Standby mode after the selected period of time.

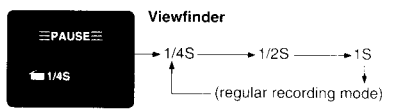
4 Repeat steps 2–3 for the required number of pictures.
5 Playback the recorded series to check if results were satisfactory.

To release the Animation mode:
Press REC TIME until "🎥" in the viewfinder disappears.
- The Animation mode can only be engaged from the Record-Standby mode.

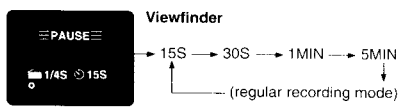
Time-lapse

The Time-Lapse function allows automatic sequential on/off recording at preset time spans. With the camcorder continuously focused on a specific scene or object, the resulting recording will show subtle changes (such as shifts in cloud formations, plant growth etc.) over an extended period of time.

1 Put the camcorder into the Record-Standby mode.
2 Press REC TIME to select the recording time.
— The following sequence of time settings is displayed with each press of REC TIME:



3 Press INT. TIME to select the interval time.
— The following sequence of time settings is displayed with each press of INT. TIME:



4 Press START/STOP to start the Time-Lapse recording. The selected recording time and interval will alternate automatically.
- The tally lamp functions in the same way as in Self-Timer shooting.

To release the Time-Lapse mode:

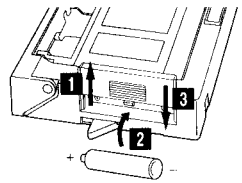
When the tally lamp is not blinking:
Press INT. TIME and REC TIME continuously until "🎥" and "⏲" go off.

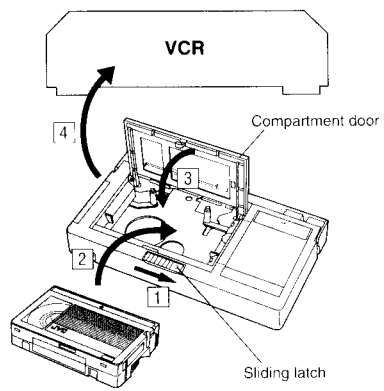
When the tally lamp is blinking:
Press Start/Stop to stop the blinking, then press the INT. TIME and REC TIME continuously until "🎥" and "⏲" go off.

Notes and Advice

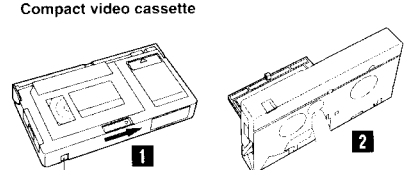
- Keep the camcorder steady in one position when filming the series of shots for best results. Mounting the camcorder on a tripod is recommended.
- Before recording in the Animation mode at the very beginning of a tape, set the camcorder to the Recording mode for about 5 seconds, so that the tape runs smoothly. Using the Fade-in function at this point is a good way to begin an animated programme.
- Fade-in/out is not possible during Animation or Time-Lapse shooting.
- During steps 2 or 3 of the Time-Lapse, if the camcorder's PROGRAM AE is set to "⏲" (Self-Timer mode), the Self-Timer 15S mode will be engaged. (☞ P. 16)

USING THE CASSETTE ADAPTER





Compact video cassette



Recording safety hole

By using the provided cassette adapter (C-P7U), a VHS video cassette recorded with this camcorder can be played back with any VHS video recorder. When the VHS-C video cassette is installed in the cassette adapter, it is fully compatible for both recording and playback on any VHS video recorder. The C-P7U cassette adapter is battery-powered and will automatically perform tape loading and unloading.

Inserting the battery into the cassette adapter

1 Remove the battery cover by sliding it up.
2 Install one "R6 (AA)" size battery as shown.
3 Reattach the cover.

[illegible] the VCR

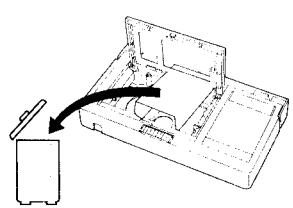
1 Open the compartment door by sliding the latch.
2 Insert the compact video cassette.
3 Close the compartment door. The tape is loaded.
4 Insert the cassette adapter into the VCR.
5 Playback the tape.

[illegible] the cassette

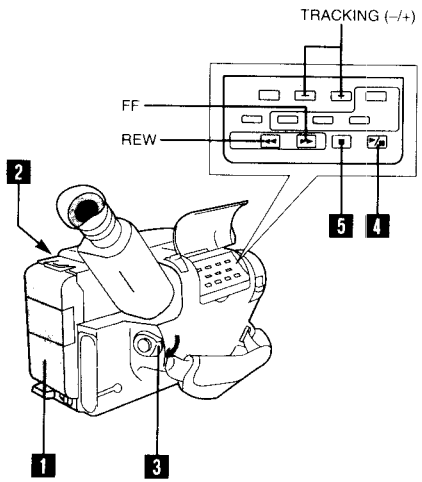
1 Slide the sliding latch.
— The tape will be unloaded and the compartment door will open.
2 Insert your finger into the hole on the underside of the adapter, push the cassette up from below and remove it.

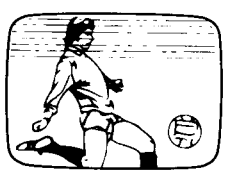
Notes and Advice

- Only compact video cassette tapes marked VHS-C can be used with the cassette adapter.
- During special-effect playback (slow motion, still frame, etc.), the picture may vibrate or noise bars may appear on the screen.
- When using the cassette adapter with a compact video cassette installed to record on a VCR, cover the recording safety hole using adhesive tape.
- Please remove paper before using the C-P7U.



PLAYBACK





The camcorder permits playback of recorded "VHS-C" video cassettes.
For connections refer to page 28.

PLAYBACK OPERATION

1. Preparations

1 Supply power. (Battery or AC operation: ☞ P. 7)
2 Insert a pre-recorded VHS-C cassette.
- Ensure that tape is not slack inside the cassette, then load the cassette correctly. ☞ P. 11.

2. To playback a cassette

3 Set the power switch to "PLAY".
— The power indicator lights.
4 Press PLAY/PAUSE.
— Playback starts and playback picture appears on the viewfinder screen and connected TV.

3. To stop playback

5 Press STOP.

REWIND OR FAST-FORWARD THE TAPE

To rewind the tape:
When in the stop mode, press REW.
To fast-forward the tape:
When in the stop mode, press FF.

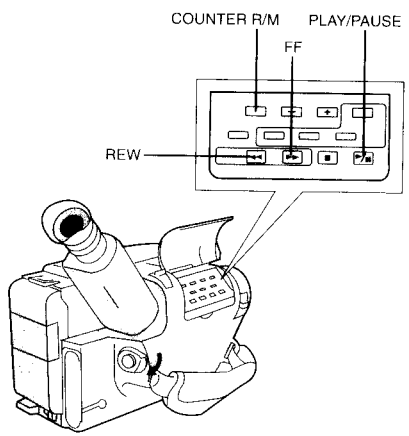
MANUAL TRACKING

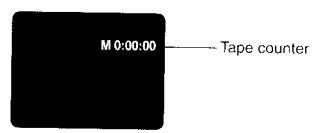
If noise bars appear on the screen, the tracking needs to be adjusted.

1 Press either TRACKING as many times to adjust to the best picture possible.
- To reset the tracking back to its standard preset, press both TRACKING (–/+) simultaneously.

Notes and Advice

- After about 5 minutes in Stop mode, the camcorder switches itself off automatically. (To turn on the camcorder again, set the power switch to "POWER OFF" first and then back to "PLAY".)
- The tracking adjustment may not be effective on tapes recorded on another VCR's or camcorders.





Viewfinder

STILL PLAYBACK

Press PLAY/PAUSE during playback.
- To resume normal playback, press PLAY/PAUSE again.

SHUTTLE SEARCH

Fast-speed forward playback:
Press FF during playback.
— Playback speed of the tape will be 3 times the normal speed.

Fast-speed reverse playback:
Press REW during playback.
— Reverse playback speed of the tape will be 3 times the normal speed.

COUNTER MEMORY FUNCTION

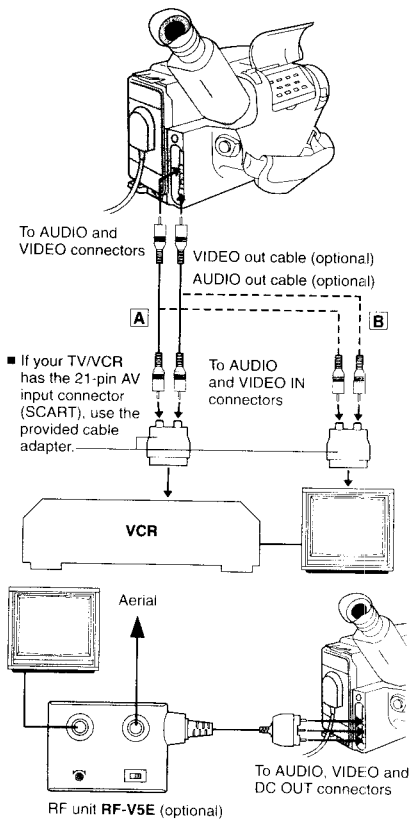
This camcorder incorporates a counter memory function which facilitates locating a specific tape segment.

1 Press COUNTER R/M for more than 2 seconds.
— Resets the counter to "0:00:00".
2 Press COUNTER R/M for less than 1 second.
— "M" appears.
3 After recording or playback, press STOP, then REW.
— The tape will automatically stop at the counter reading of around "0:00:00".
4 Press PLAY/PAUSE. — Playback starts.

Notes and Advice

- For brief fast-speed searching, hold FF or REW for more than 2 seconds. When the button is released, the search ends and the tape will play.
- Noise bars will appear and pictures may become monochrome while in Still Playback or Shuttle Search. This is not due to any defect of the unit.
- To protect the tape and to conserve power, the camcorder will enter the stop mode and turn itself off after 5 minutes of still playback.
- The counter memory functions in the Fast-Forward and Rewind modes.
- To cancel the memory function, press COUNTER R/M so that the "M" disappears.

CONNECTIONS


To AUDIO and VIDEO connectors
VIDEO out cable (optional)
AUDIO out cable (optional)
A
B
■ If your TV/VCR has the 21-pin AV input connector (SCART), use the provided cable adapter.
To AUDIO and VIDEO IN connectors
VCR
Aerial
To AUDIO, VIDEO and DC OUT connectors
RF unit RF-V5E (optional)

Also refer to the instruction manual for your VCR or TV when connecting the camcorder to them.

[redacted]

In this situation, use the AUDIO and VIDEO output cables (optional).

1. Connect the camcorder and the VCR as shown in the diagram on the left.
2. Turn on the camcorder, the VCR and TV.
3. Set the VCR to AUX (iliary) input mode, and the TV to the VIDEO mode.

[redacted]

In this situation, use the AUDIO and VIDEO output cables (optional).

- Connect the AUDIO and VIDEO connectors of the camcorder to the A/V input connector of the television.
- Use the Video (or AV) mode specified in the TV's instruction manual.

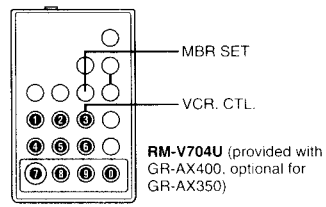
[redacted]

In this situation, use the RF unit RF-V5E (optional). For connection and operation, please refer to the instruction manual for the RF-V5E.

Notes and Advice

- It is recommended to use the AC Power Adapter/Charger as the power supply rather than the battery pack.
- It is possible to monitor the picture and sound from the camcorder even when a cassette tape is not loaded. Set the power switch to "CAMERA". When you select the television input from your camcorder, the audio and video can be monitored.
- Some speakers and televisions are specially shielded to prevent television interference. If neither is shielded, do not place the speakers adjacent to the television, otherwise the video playback picture will have interference.

EDITING TECHNIQUES



RM-V704U (provided with GR-AX400, optional for GR-AX350)

VCR CODE LIST

VCR BRAND NAME	BUTTONS (A) (B)
AKAI	6 2 6 4 7 7
BLAUPUNKT	1 3
FERGUSON	3 7 3 8 3 2
GRUNDIG	1 4 3 4
HITACHI	6 6 6 3
JVC A B C	3 1 3 6 3 3
MITSUBISHI	6 7 6 8
NEC	3 7 3 8
PANASONIC	1 3 1 7 1 1 3 4 1 8

VCR BRAND NAME	BUTTONS (A) (B)
PHILIPS	1 9 3 5 1 1 3 4 3 1 3 6 1 2 3 3
SANYO	3 6 3 5
SELECO, REX	3 1 3 6
SHARP	1 5 1 0
SONY	6 5 6 0 3 3 3 1
THOMSON, TELEFUNKEN, SABA, NORDMENDE	3 1 3 6 3 7 3 2
TOSHIBA	6 3 6 1

RANDOM ASSEMBLE EDITING

This function makes it easier to create edited videos when your camcorder is used as the source player in combination with your VCR. You can pre-select up to 8 scenes or "cuts" for automatic editing in the sequence you have specified. Random Assemble Editing can be more conveniently done if the RM-V704U MBR (Multi Brand Remote, provided) has been set to correspond to the brand of your VCR.

1 How to set the remote control unit to correspond to the brand of your VCR:

Turn the VCR's power off before starting.

1. Point the remote control toward the VCR's infrared beam sensor window.
2. Refer to the list on the left, and while pressing MBR SET, press button (A), then press button (B).
3. Release MBR SET.
   - The code is set and the VCR's power automatically comes on.
     If your VCR has more than one code, choose the code with which you can turn the VCR's power on.
     (With some VCR brands, power won't come on automatically. In this case, turn the VCR power on manually and check to see if the remote control buttons work with the VCR.)

2 How to operate the VCR:

1. Turn the VCR's power ON.
2. Press the button on the remote control unit corresponding to the function you want to operate while pressing VCR CTL.

(Continued on next page.)

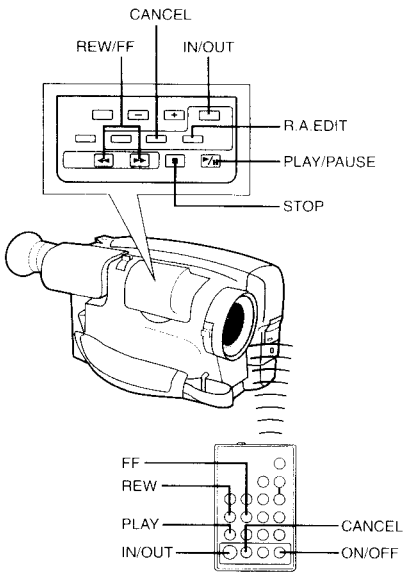
Notes and Advice

- Since the remote control unit has a number of operation codes, determine the appropriate code for operating your VCR by confirming correct VCR operations according to the steps above.
- The VCR functions that the RM-V704U can control are PLAY, STOP, PAUSE, FF, REW and VCR REC STBY. Among them, VCR REC STBY button doesn't need to be pressed along with VCR CTL.
- If the RM-V704U is not able to control the VCR, use the controls on the VCR.

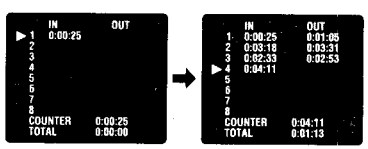
IMPORTANT

- Although the MBR (Multi-Brand Remote Control) is compatible with JVC VCRs, as well as many VCR models manufactured by others, it is possible that this remote control will not work with your VCR or may offer limited functions.

EDITING TECHNIQUES (Cont'd)



RM-V704U (provided with GR-AX400, optional for GR-AX350)



Preparations

- Connect the camcorder and the recording deck as per the diagram on the right (P. 31).

[A]: If the recording deck is a JVC VCR that has a Remote PAUSE terminal, connect the Editing cable to it. (If the VCR does not have a Remote PAUSE terminal, connect to the R.A.EDIT connector.)

[B]: If the VCR has neither a Remote PAUSE nor an R.A.EDIT connector, connect the Editing cable to the RM-V704U's Pause-In jack.

- Camcorder: Correctly insert a recorded tape and set the power switch to "PLAY".
- VCR: Turn power on. Insert a recordable tape, and set to the AUX(iliary) mode. Refer to VCR's manual for details.

To select up to 8 scenes

1. Press PLAY/PAUSE.
2. Press R. A. EDIT.
   - The R. A. Edit counter display will appear in the viewfinder and on the TV screen.
3. Use FF or REW to search for the beginning of a scene you want, press IN/OUT.
   - The in-point's counter reading is registered on the display.
4. Use FF or REW to search for the end of the scene you want, press IN/OUT again.
   - The out-point's counter reading is registered on the display.
   - The "TOTAL" reading shows the total running time of the edited scenes.
5. Specify additional scenes by repeating steps 3 – 4.

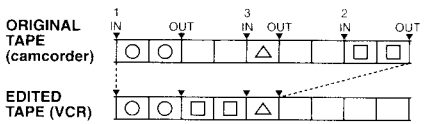
The RM-V704U can also be used for the following:

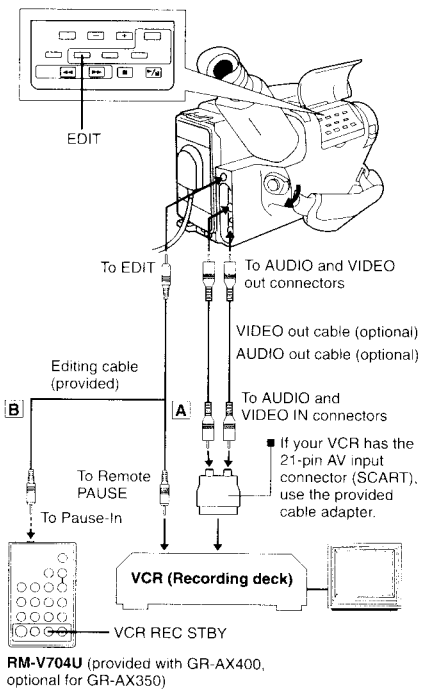
- ON/OFF functions same as R.A.EDIT of the camcorder
- IN/OUT functions same as IN/OUT of the camcorder
- CANCEL functions same as CANCEL of the camcorder

Notes and Advice

- For any scene, the out-point must have a counter reading that is at least 1 second after the in-point. An out-point with a counter reading less than or the same as the in-point will not be registered.
- Since the camcorder prerolls during R.A. Edit, there must be at least 15 seconds worth of recording material prior to any in-point on the playback tape.
- Blank portions of tape cannot be registered as in- or out-points.
- If the search time for an in-point exceeds 5 minutes, the recording deck's Record-Pause mode will be cancelled and editing will not take place.
- Pressing the R.A. EDIT (ON/OFF) button will clear all in- and out-points from memory.
- When editing, a slight discrepancy between the counter reading and actual in- and out-points may occur. Please position your in- and out-points with enough leeway so that segments will be recorded in their entirety (not cut off).

(Continued on next page.)





RM-V704U (provided with GR-AX400, optional for GR-AX350)

During steps 3 and 4 on the previous page, pressing CANCEL will erase the last in- or out-point. Pressing again will erase the point before that, and so on.

1. Put the VCR in the Record-Pause mode. RM-V704U can also be used.
   - Point the remote control toward the VCR's infrared sensor window and press VCR REC STBY.
   - Be sure that the VCR enters the Record-Pause mode. If not, use the controls on the VCR to enter the Record-Pause mode.

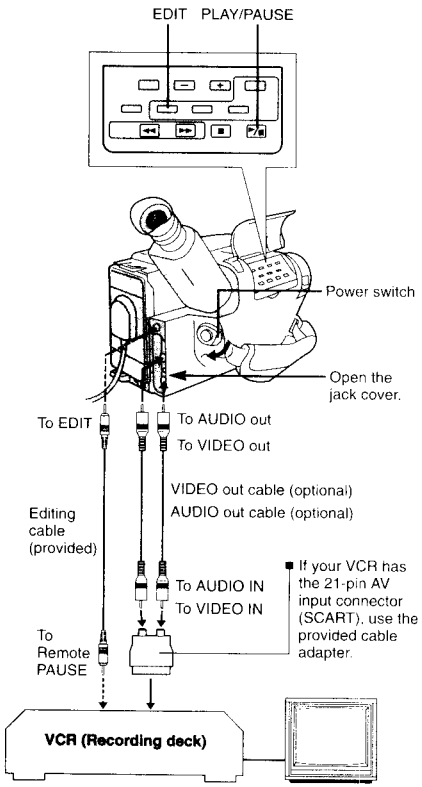
   Note:
   With some manufacturer's VCR's, pressing VCR REC STBY may not place the VCR into the Record-Pause mode.
2. Press the camcorder's EDIT.
   - The function begins automatic editing; all the scenes are copied to the VCR in the specified order.
   - Keep the remote control pointed toward the VCR's remote sensor window. (in case of [B])
   - The on-screen display remains superimposed while the camcorder searches for each scene (the blinking cursor points to the scene number presently being searched), and is not displayed while the scenes are being edited.
   - When R. A. Edit is finished, the camcorder enters the Still mode and the VCR enters the Record-Pause mode. Press STOP on both units to end R. A. Edit.

To make a duplicate copy of the camcorder's tape, perform R. A. Edit by specifying only one in-point (and no out-point). R. A. Edit will automatically dub everything from that in-point to the end of the tape.

Notes and Advice

- With some VCR models, there may be noise at the in- or out-points on the edited tape.

EDITING TECHNIQUES (Cont'd)



TAPE DUBBING

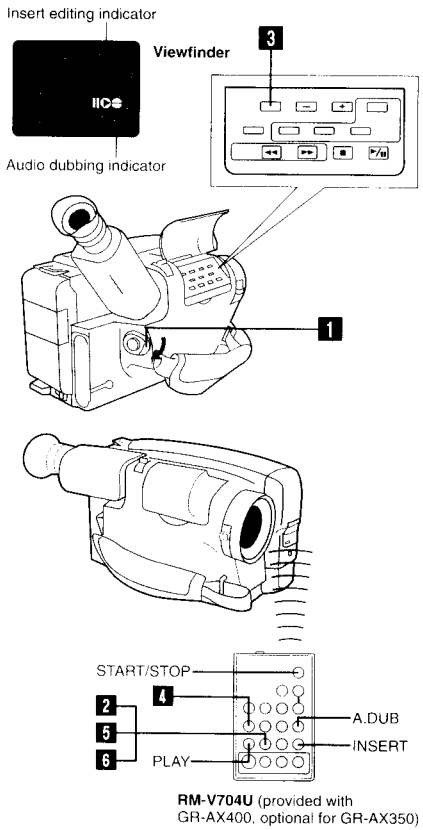
Preparations

- Connect the camcorder and the VCR as shown in the diagram on the left.
  — The editing cable is used to connect the camcorder and a JVC VCR with a Remote PAUSE terminal.*
  (If the VCR does not have a Remote PAUSE jack, you can use the R.A. EDIT jack if one is available. See additional notes on Dubbing using the editing cable below.)
- Set the power switch to "PLAY".
- Turn on the VCR.
- Correctly insert the appropriate cassettes into the camcorder and the VCR.

1. Engage the VCR's AUX(iliary) mode and Record-Pause mode.
2. Engage the camcorder's play mode to locate a position on the tape slightly before edit-in point. When this point is reached, press PAUSE to enter the still mode.
3. Press the camcorder's EDIT and set the VCR's recording mode to start editing.
   —The camcorder rolls back the tape a little before it starts playback.
4. When the tape reaches the edit-out point, put the VCR's Record-Pause mode and the camcorder's still mode.
   - Repeat steps 2 - 4.
   - Stop both the camcorder and the VCR when dubbing is finished.

Notes and Advice

- ***Dubbing using the editing cable to connect the camcorder and the JVC VCR with a Remote PAUSE terminal**
  — When the camcorder's EDIT is pressed at step 3, the VCR automatically starts recording. When the camcorder's PLAY/PAUSE is pressed, the VCR automatically enters the Record-Pause mode.
  — Reset the camcorder's counter in advance to "M0:00:00" at an edit-out point. When the tape reaches the point (counter reading of 0:00:00) during dubbing, the camcorder enters the Still mode and the VCR enters the Record-Pause mode automatically. This function is called "Master Edit Control System".
- There are some VCRs which are not compatible with the Master Edit Control system.
- When the tape reaches the preset edit-out point (M0:00:00)during the dubbing operation, it may stop slightly before or after the designated point on the tape.



RM-V704U (provided with GR-AX400, optional for GR-AX350)

INSERT EDITING / AUDIO DUBBING

- Insert Editing means recording a new scene into a section of prerecorded tape so that a part of the original recording can be replaced with a new sequence without excessive picture distortion at the edit-in and edit-out points. In the Insert Editing mode, the original audio on the audio track remains unchanged.
- Audio Dubbing means recording a new soundtrack on a pre-recorded tape, i.e., replacing the original sound with new audio material.

1. Set the power switch to "PLAY".
2. Locate the desired edit-out point on the tape and press PAUSE.
3. Press COUNTER R/M for more than 2 seconds, then press it once again for less than 1 second to set the counter to "M 0:00:00".
4. Press REW to rewind the tape a little beyond the beginning of the scene you wish to insert/dub audio.
5. Press PAUSE exactly at the beginning of the scene.

Insert Editing

6. While holding INSERT pressed, press PAUSE.
   — The camcorder enters the Insert Editing mode with the scene at which the camcorder is aimed appearing on the screen for monitoring.
7. Press START/STOP to insert the new sequence.
- When the counter reading of "0:00:00" is reached, Insert Editing stops automatically and the camcorder enters the Playback mode.

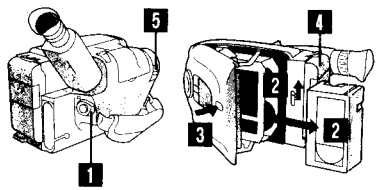
Audio Dubbing

6. While pressing A.DUB, press PAUSE to enter the Audio Dub Standby mode.
7. Press PLAY. — Audio Dubbing begins.
- When the counter reading of "0:00:00" is reached, Audio Dubbing stops automatically and the camcorder enters the Playback mode.

Notes and Advice

- If the tape has a blank segment, Insert Editing/Audio Dubbing may not function properly.
- When in the Still mode, the counter indication may be blurred. This is normal.
- When the tape reaches the preset edit-out point during the editing operation, it may stop slightly before or after the designated point on the tape. Also, at that time, noise bars may appear momentarily. Neither of these is a defect of the unit.
- Only video signal is recorded in the Insert Editing mode. When the sound is to be recorded, press A. DUB and PAUSE simultaneously in the Insert Pause mode. When INSERT and PAUSE are pressed simultaneously again, the unit re-enters the Video-signal-only Recording mode.
- Tapes with their safety tabs removed cannot be Insert-Edited/Audio-Dubbed. Reseal the safety tab slot to perform the dubbing.
- If whistling or howling is heard during Insert Editing/Audio Dubbing, reduce the TV volume or move the mike farther away from the TV.
- If the camcorder is connected to the TV, noise may appear on the screen during the Audio Dubbing procedure. This phenomenon is not recorded on the tape.

AFTER USE



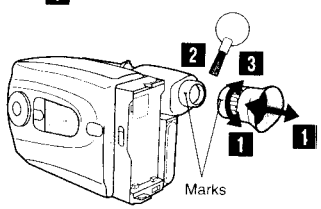
1 Set the power switch to "POWER OFF" to turn power off.
2 Slide EJECT to open the cassette holder, then remove the cassette.
3 Close and lock the cassette holder by pressing PUSH.
4 Press BATT. RELEASE to remove the battery pack.
5 Slide the LENS COVER open/close switch to close the lens cover.

HOW TO CLEAN THE CAMCORDER

When the camcorder's exterior is dusty, clean by gently wiping with a soft cloth.

HOW TO CLEAN THE LENS

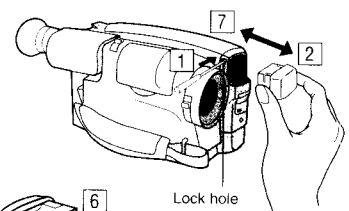
When the lens is dirty or dusty, blow it with a blower brush and then gently wipe with lens cleaning paper.



HOW TO CLEAN THE VIEWFINDER

The viewfinder eyepiece can be removed for cleaning.

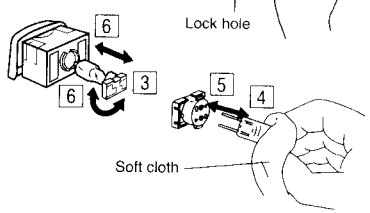
1 Turn the eyepiece counterclockwise and pull it out.
2 Remove dust with a blower brush.
3 Align the marks, reattach the eyepiece and turn it clockwise.



HOW TO REPLACE THE VIDEO LIGHT BULB (GR-AX400 only)

It is recommended to consult your nearest JVC dealer for replacing the bulb. However, if you wish to do it yourself, proceed as follows:

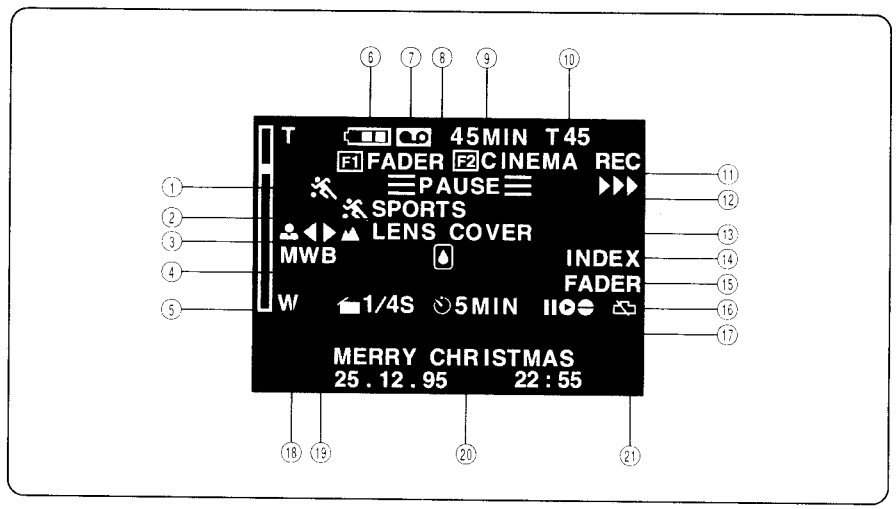
1 Insert a flat and narrow object into the lock hole.
2 Pull out the video light unit.
3 Turn the bulb unit counterclockwise to remove it.
4 Pull out the bulb.
5 Insert a new bulb. At this time it is important to hold the bulb using a soft cloth. Do not touch the bulb directly.
6 Replace the bulb unit.
7 Reattach the video light unit.



Notes and Advice

- Avoid using of strong cleaning agents such as benzine or alcohol as they may damage the exterior.
- The video light unit and the bulb are very hot immediately after the power is turned off. Bulb replacement should be performed after it has cooled. (It will take approx. 30 minutes to cool sufficiently.)
- Do not touch the bulb directly. If it is becomes dirty, smoke or reduced service life may result. When accidentally touched by your fingers, wipe it with a soft cloth.
- Give the part number YQ20645-001 when ordering a video light bulb.
- Use the exclusive halogen bulb which is available at your nearest JVC dealer.

VIEWFINDER INDICATIONS

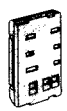


①, ② **Programme AE indicator** (☞ P. 16)
Displayed at ② for approx. 3 seconds when the PROGRAM AE select dial is switched from one position to another. Then only the indicator remains at ①.
③ **Focus indicator** (☞ P. 18, 19)
④ **White balance mode indicator** (☞ P. 22)
⑤ **Zoom level indicator** (☞ P. 14)/
Exposure indicator bar (☞ P. 19)
⑥ **Battery pack's remaining power indicator**
Changes as follows according to the battery pack's remaining power level: → → →
When the battery power is coming to an end, a battery indicator ( ) blinks in the viewfinder. After indication blinks, the power turns off automatically. Replace the battery pack with a fully charged one. (☞ P. 7, 8)
⑦ **Cassette warning**
Blinks to warn that no cassette without safety tab is loaded.
⑧ **Intelligent function control indicator**
(☞ P. 17 – 21)
⑨ **Remaining tape time** (☞ P. 11)
⑩ **Tape length indicator** (☞ P. 11)
⑪ **Recording indicator** (☞ P. 12)
⑫ **Recording-Standby indicator:** PAUSE
(☞ P. 12)
Auto Pause indicator: AUTO PAUSE
(GR-AX400 only, ☞ P. 13)
⑬ **Lens cover warning**
Blinks for approx. 5 seconds, whether the lens cover is open or closed, everytime the unit is turned on. Lets the user check to see if the cover is open.
⑭ **Index Code Marking** (☞ P. 14)
⑮ **Fade-Standby indicator** (☞ P. 17)
⑯ **Clock battery warning**
Blinks when the clock (lithium) battery is not in place or exhausted. In this condition, no date/time function is available. (For inserting or replacing the clock battery, ☞ P. 10)
⑰ **Insert Editing/Audio Dubbing indicators**
(☞ P. 33)
⑱ **Condensation warning**
Blinks when moisture condensation occurs on the head drum. While the indication is in the viewfinder, the unit's functions come to a halt. Turn off the unit and leave it for a few hours. Then turn on the unit. A few minutes later, the warning should disappear.
⑲ **Instant title** (☞ P. 21)
⑳ **Date/Time/Character** (☞ P. 20, 21)
㉑ **Interval time/Recording time indicator**
For Self-Timer, Animation and Time-Lapse functions (☞ P. 16, 23, 24)

SYSTEMS FLEXIBILITY

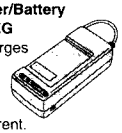
For maximum enjoyment, make the most of the provided or optional accessories depending on the situation.

■ **Battery pack**
BN-V12U
BN-V22U
BN-V25U
BN-V60U



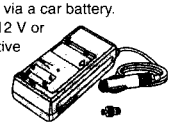
*Recording time ☞ P. 7

■ **AC Power Adapter/Battery Charger AA-V11EG**
Charges or discharges battery pack or powers the camcorder via household AC current.
(Can be used with 110 V to 240 V.)



*Charging time ☞ P. 8

■ **Car battery charger BH-V3E**
Charges battery pack or powers the camcorder via a car battery.
(Use with 12 V or 24 V nagative grounded cars only.)



*Charging time

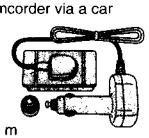
BN-V12U	Approx. 50 min.
BN-V22U	Approx. 90 min.
BN-V25U	Approx. 120 min.
BN-V60U	Approx. 90 min.

■ **Battery charger BH-VC10EG**
Use to charge the battery pack.

*Charging time

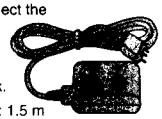
BN-V12U	Approx. 7 hours
BN-V22U	Approx. 13 hours
BN-V25U	Approx. 17 hours
BN-V60U	Approx. 13 hours

■ **Car battery cord AP-V7E**
Power the camcorder via a car battery.
(Use with 12 V negative grounded cars only.)



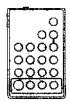
*Cable length: 2 m

■ **RF unit RF-V5E**
Use to connect the camcorder to a regular television for playback.

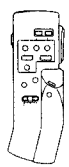


*Cable length: 1.5 m

■ **Wireless remote control unit**
RM-V704U

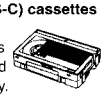


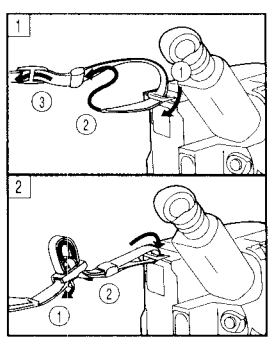
■ **Wired remote control unit**
RM-V20U
Controls the camcorder's functions (POWER ON/OFF, REW, FF, STOP, PLAY, PAUSE, INSERT, AUDIO DUB, REC TIME, INTERVAL, VISS, START/STOP, ZOOM T/W) from a distance, and from any direction.

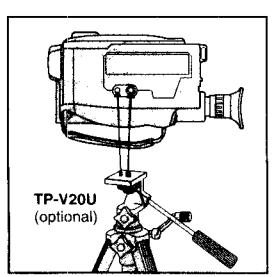


*Cable length: 3 m

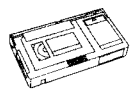
■ **Compact VHS (VHS-C) cassettes**
EC-45/30
Allows 45/30 minutes of VHS recording and playback respectively.





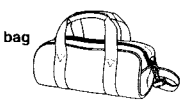


■ **Cassette adapter C-P6U/C-P7U**
Enables the VHS-C cassette to be used with regular VHS machines.



■ **AUDIO and VIDEO output cable**
YQ31950A

■ **Active carrying bag**
CB-V7U



*Dimensions (WxHxD):
340 x 170 x 155 mm

Some accessories are not available in some areas. Please consult your nearest JVC dealer before purchasing optional accessories.

ATTACHING THE SHOULDER STRAP

1 Loop the end of the strap over the top of the eyelet ①, then, folding it back, thread the end of the strap first through the keeper ②, then the buckle ③. Making sure that the strap is not twisted, repeat the above procedure to attach the other end of the strap to the other eyelet.

2 Adjust the shoulder strap to the desired length ①, then slide both keepers up snug against the eyelets to prevent the strap from slipping ②.

TRIPOD MOUNTING

Align the screw and camera direction stud of the tripod with the camera's tripod mounting socket and stud hole, and firmly tighten the screw.

HELPFUL TERMS AND INFORMATION

The following glossary is for your convenience in helping you better understand your camcorder and its operation.

Auto Gain Control: (☞ P. 16)
Automatically increases camera sensitivity when the illumination falls below a certain level.

Auto Pause System: (☞ P. 13)
Prevents shooting unnecessary scenes by mistake when the camcorder is pointed straight down (i.e., the ground, feet).

AUX mode: (☞ P. 28, 30, 32)
Refers to Auxiliary mode. When the camcorder is connected to a VCR for editing or dubbing, the VCR should be set to this mode.

AV:
Short for Audio/Video. Often refers to the audio (sound) and video (picture) signals which, when combined, make up a programme.

CCD (Charge Coupled Device):
Solid-state imaging device used in camcorders as the camera's image pickup; analogous to the eye's retina except that picture information is output as electric signals.

Colour temperature: (☞ P. 22)
A measurement in Kelvin degrees which indicates the colour contents of a light source; bluish light has a higher colour temperature than reddish light. To reproduce white as white under different types of lighting, the chrominance signal must be adjusted to match the light source's colour temperature.

Head:
An electronic component which "writes" or "reads" video and audio signals on the tape.

HQ (High Quality):
An enhancement feature in the VCR circuitry which provides greater picture detail.

Quick review: (☞ P. 13)
Permits reviewing of the final part of the last recorded segment in the Record-Standby mode.

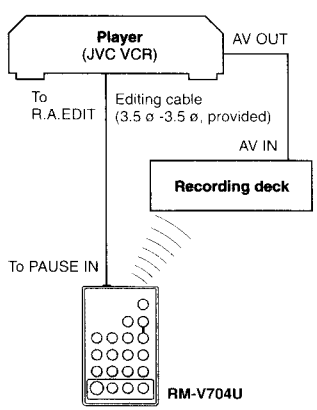
R.A.Edit (Random Assemble Editing): (☞ P. 29)
This feature lets you pre-select up to 8 scenes to be automatically rearranged and edited to a connected VCR.

Refresh: (☞ P. 8)
A feature on the AC power adapter that lets you completely discharge the power from the battery pack before charging again. Contributes to longer battery life.

Tracking: (☞ P. 26)
A mechanism enabling the tracking position to be adjusted during playback so that the heads can accurately pick up the recorded signal in the best condition.

VCR: (☞ P. 28, 30, 32)
Short for Video Cassette Recorder.

SUPPLEMENTAL INFORMATION ON THE REMOTE CONTROL



Using the RM-V704U remote control, it is also possible to perform deck-to-deck Random Assemble Editing. The playback deck must be an R.A. Edit-capable JVC VCR. The recording deck can be...
- a VCR other than JVC, or
- a JVC VCR which has neither a Remote PAUSE nor an R.A. EDIT connector

How to use:
— Connect the playback deck and RM-V704U as shown on the left.
— Set the RM-V704U to correspond to the brand of the recording deck. (☞ P. 29)
— For Random Assemble Editing procedure, please refer to the instruction manual of the JVC VCR you are using as the playback deck.

Notes:
- RM-V704U cannot be used to control the playback deck.
- RM-V704U is capable of controling basic operations of the recording deck. While pressing VCR CTL, press PLAY, STOP, PAUSE, FF or REW for these functions. (Not possible with some brands and models). Other buttons cannot be used.
- To put the recording deck in the Record-Pause mode, use the controls on the recording deck itself.

CAUTIONS

[illegible], strictly observe the following instructions.

- Do not open the camcorder's chassis.
- Prevent inflammables, water and metallic objects from entering the unit.
- Do not disassemble or modify the unit.
- Do not use the unit when there is lightning in the vicinity. Disconnect the power cable of connected equipment.
- Do not short-circuit the terminals of the battery packs. When carrying a battery pack, keep it away from metallic objects (key holder, necklace, etc.) by putting it in a vinyl bag, etc. This can prevent accidents.

Avoid using the unit under the following conditions:

- Places subject to excessive humidity or dust.
- Near appliances generating strong magnetic or electric fields (speakers, broadcasting antennas, etc.).
- Places subject to soot or steam such as near a cooking stove.
- Places subject to excessive shock or vibration.
- Near a television set (rolling pictures or howling might result).
- Extremely hot places.

Do not expose the unit to high temperatures over 40°C for long periods.

If the unit should be subjected to direct sunlight, or left in a closed car in summer, or placed near a heater, the CCD and the auto-focus sensor may deteriorate and the cabinet may become deformed. Furthermore, this also may cause the transistors and other electronic and mechanical parts to malfunction. Remember the following:

- Do not leave the unit in places of over 50°C.
- Do not use the unit in places of over 40°C.
- Do not use the unit in places of below 0°C.
- Protect the unit from excessively dry or humid conditions (below 35% or above 80% humidity).
- For long storage, select a place between –20°C and 30°C.

Be careful when using the video light. (GR-SX400 only)

- The video light becomes extremely hot. Do not touch it either while in operation or soon after turning it off, otherwise serious injury may result.
- Do not place the camcorder into the carrying case immediately after using the video light, since it remains extremely hot.
- When operating, keep a distance of about 30 cm between the video light and people or object.
- Do not us e near flammable or explosive materials.

Take special care for protection of the unit.

- Do not allow the unit to become wet.
- Do not leave the unit in closed cars on hot summer days.
- Take special care not to drop the unit or strike it against hard objects. Protect from shocks during transportation.

Make it a rule to observe the following instructions.

- Do not remove the battery pack or disconnect other power supply units while the power is on. If not observed, this will cause tape damage and missoperation.
- When the unit is not in use, remove the battery pack.

Keep the lens and viewfinder eyepiece always clean.

- When the lens is dirty or dusty, blow it off first and then gently wipe with a soft brush or lens cleaning paper.
- Mold may form if the lens is left dirty.

Handle the unit carefully.

- Protect the microphone from excessive shocks.
- Do not carry the unit by holding it only by the viewfinder.
- Avoid undue strain on the camcorder's shoulder strap, such as unnecessarily swinging the camcorder.

Moisture condensation.

- You have observed that pouring a cold liquid into a glass will cause drops of water to form on the glass's outer surface. This same phenomenon occurs on the head drum of a camcorder when it is moved from a cool place to a warm place, after heating a cold room, under extremely humid conditions or in a place directly subjected to the cool air from an air conditioner.
- Moisture on the head drum can cause severe damage to the video tape, and can lead to internal damage to the camcorder itself.
- If moisture condensation occurs on the head drum, a condensation warning appears in the viewfinder and the unit enters the Stop mode, unable to function. In such a case, turn off the unit, and leave it for a few hours. Then set the power switch to "CAMERA" or "PLAY". A few minutes later, the warning should disappear.

Be careful not to damage the CCD.

- Do not keep the lens directed at extremely bright objects such as the sun or other light sources for long periods. Although the CCD is less susceptible to such burn than a tube would be, caution should be exercised when using this unit. Most importantly, the lens should be capped except while actually shooting.
- Do not direct the eyepiece of the viewfinder at the sun.

Maintenance

- When the cabinet is dusty, clean by gently wiping with a soft cloth.
- Avoid the use of strong cleaning agents such as benzine or alcohol as they may damage the cabinet.
- Cleaning should be done only after the battery pack has been removed or other power units have been disconnected.

Serious malfunctioning

If malfunctioning occurs, stop using the unit immediately and consult your local JVC dealer.

General Battery Precautions

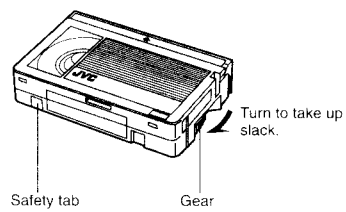
- When the RM-V20U/C-P6U/C-P7U is not functioning even when correctly operated, the batteries are exhausted. Replace them with fresh batteries.
- Use only following batteries in the unit.
  RM-V20U .....R03 (AAA) size
  C-P6U/C-P7U .....R6 (AA) size

Please make note of the following rules for battery use. When misused, batteries can leak or explode.

1. Insert the batteries correctly according to the diagram inside the battery section.
2. Do not use old and new batteries together.
3. Do not use two different kinds of batteries. Although sizes may be the same, voltages may differ.
4. Do not expose batteries to excessive heat as they can leak, or explode. Do not dispose of batteries in a fire.
5. Remove batteries from the unit if it is to be stored for an extended period to avoid battery leakage which can cause malfunctions.

VIDEO CASSETTES

- The camcorder employs only the cassettes carrying the VHS-C mark.
- Recording onto prerecorded tapes automatically erases the previously recorded video and audio signals.
- An inverted cassette cannot be inserted.
- Do not load and unload the cassette repeatedly without allowing the tape to run at all. This will slacken the tape and thereby damage it.
- Make certain before loading the cassette that the tape is not slack. If there is any slack, turn the gear on the cassette in the direction of the arrow to take up slack.
- The cassette is equipped with a safety tab to prevent accidental erasure. When the tab is removed, recording is impossible. If you wish to record on a cassette whose tab has been removed, use adhesive tape to reseal the slot.
- To avoid excessive exposure to dust and fingerprints, do not open the front tape cover.



Storage of cassettes

- Avoid exposing the cassettes to direct sunlight. Keep them away from heaters.
- Avoid storing the cassettes in humid or dusty places.
- Do not drop the cassettes. Do not expose them to violent vibrations or shocks.
- Do not expose the cassettes to strong magnetic fields (near a motor, transformer or magnet).
- Place the cassettes in cassette cases and position them vertically.

SECTION 1
DISASSEMBLY

1.1 SERVICE CAUTIONS

1.1.1 Precautions

1. Before disassembling/re-assembling the set as well as soldering parts, make sure to disconnect the power cable.
2. When disconnecting/connecting connectors, pay enough attention to wiring not to damage it.
3. In general, chip parts such as resistor, shorting jumpers (0-ohm resistor), ceramic capacitors, diodes, etc. can not be reused after they were once removed.
4. When installing parts, be careful not to do with other parts as well as not to damage others.
5. When removing ICs, be careful not to damage circuit patterns.

1.1.2 How to read the disassembly and assembly

(For Cabinet Parts)

STEP /LOC NO.	PART	Fig. No.	REMOVAL	
			*UNLOCK/RELEASE/ UNPLUG/UNCLAMP/ UNSOLDER	Note
①	CASSETTE COVER ASSY	C1	*CONNECTOR Ⓐ 2(L1)	<NOTE 1> <NOTE 2>
②	TOP COVER ASSY	C2	(S2)	<NOTE 3>
③	FRONT COVER ASSY	C3	4(S2) *CAP (JACK)	<NOTE 4>

① ② ③ ④ ⑤

① : Order of steps in Procedure
When reassembling, preform the step(s) in the reverse order. These numbers are also used as the identification (location) No. of parts Figures.

② : Part to be removed or installed.

③ : Fig. No. showing Procedure or Part Location.
C = Cabinet
CA = Camera
D = Deck

④ : Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped or unsoldered.
P = Spring
W = Washer
S = Screw
* = Unhook, unlock, release, unplug or unsolder.
2(S1) = 2 Screws (S1)

⑤ : Adjustment information for installation.

1.1.3 Connection of the wires

1. Pull the connector structure upward to release the clamp when removing or inserting the flat wire cable.

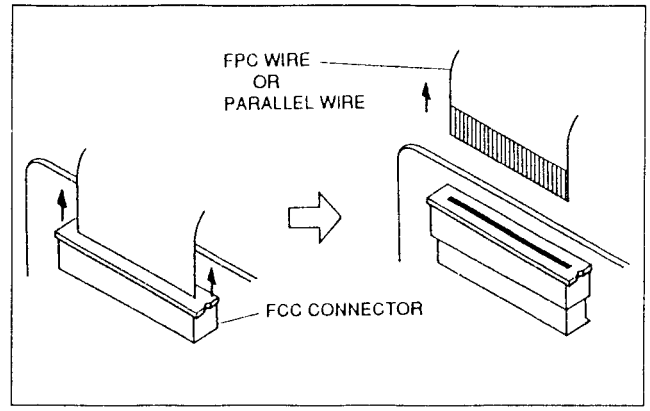


Fig. 1 TYPE A

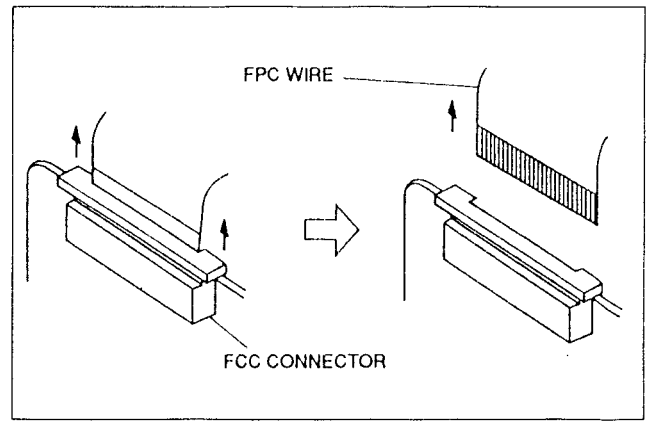


Fig. 2 TYPE B

2. Depress the connector structure downward to release the clamp when removing or inserting the flat wire cable, as indicated below.

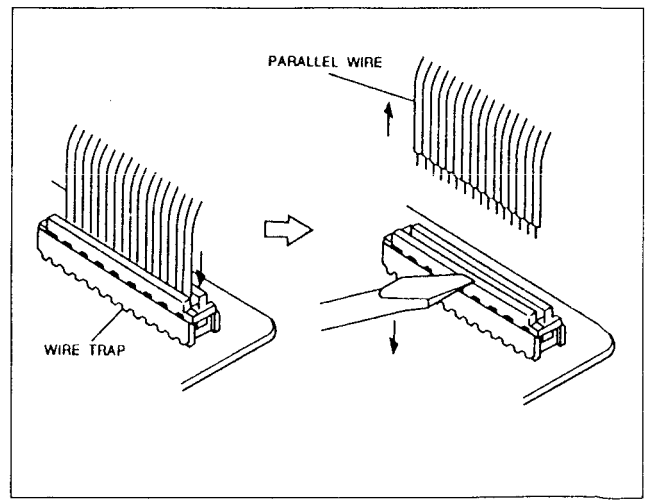


Fig. 3 TYPE C

1.1.4 Main screws to deal with disassembly/assembly

Table 1-1-1 lists screws by their symbols correspond to those shown in figures of this section "Disassembly".

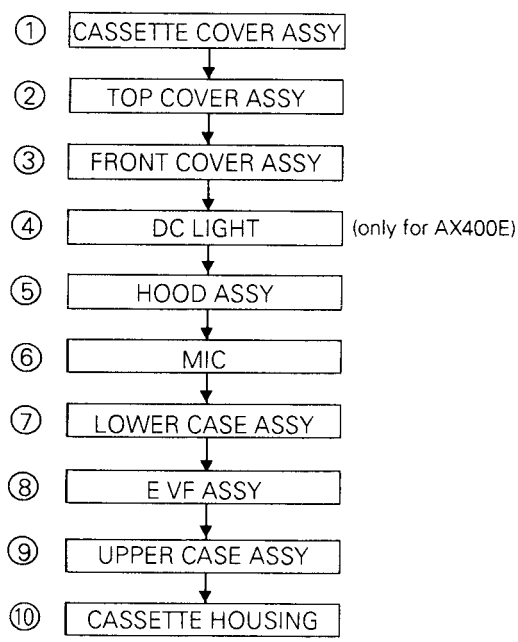
SYMBOL OF SCREW	SHAPE	PART NUMBER
S1		YQM30032-3-2
S2		YQM30032-61
S3		YQM30032-59
S4		YQM30032-5-2
S5		SPSHI725M
S6		SPSP2006Z
S7		YQM30032-60
S8		YQ43545
S9		SPSHI720M
S10		SPSHI725Z
S11		SPSHI730M

Table 1-1-1

1.2 DISASSEMBLY/ASSEMBLY OF CABINET PARTS

1.2.1 Disassembly flow chart

This flowchart indicates the disassembly step for the cabinet parts and P.C. boards in order to gain access to item(s) to be serviced. When reassembling, perform the step(s) in reverse order. Bend, route and dress the flat cables as they were originally.



1.2.2 Disassembly method

STEP /LOC NO.	PART	Fig. No.	REMOVAL	
			*UNLOCK/RELEASE/ UNPLUG/UNCLAMP/ UNSOLDER	Note
①	CASSETTE COVER ASSY	C1	*CONNECTOR Ⓐ 2(L1)	<NOTE 1> <NOTE 2>
②	TOP COVER ASSY	C2	(S2)	<NOTE 3>
③	FRONT COVER ASSY	C3	4(S2) *CAP (JACK)	<NOTE 4>
④	DC LIGHT	C3	–	only for AX400E
⑤	HOOD ASSY	C3	2(S2)	–
⑥	MIC	C3	(S2) *CONNECTOR Ⓑ	<NOTE 2>
⑦	LOWER CASE ASSY	C4	9(S2), (S3)	–
⑧	EVF ASSY	C4	2(S4) *CONNECTOR Ⓒ	<NOTE 2>
⑨	UPPER CASE ASSY	C5	7(S2) *CAP (LITIUM)	–
⑩	CASSETTE HOUSING	C6	4(S5)	–

List of Abbreviations:
- 4(S1) = 4 Screws (S1)
- 3(L1) = 3 Locking Tabs (L1)
- 3(SD1) = 3 Solder position (SD1)
- 3(K1) = 3 Positioning pins (K1)
- 2(P1) = 2 Springs (P1)
- 2(W1) = 2 Washers (W1)

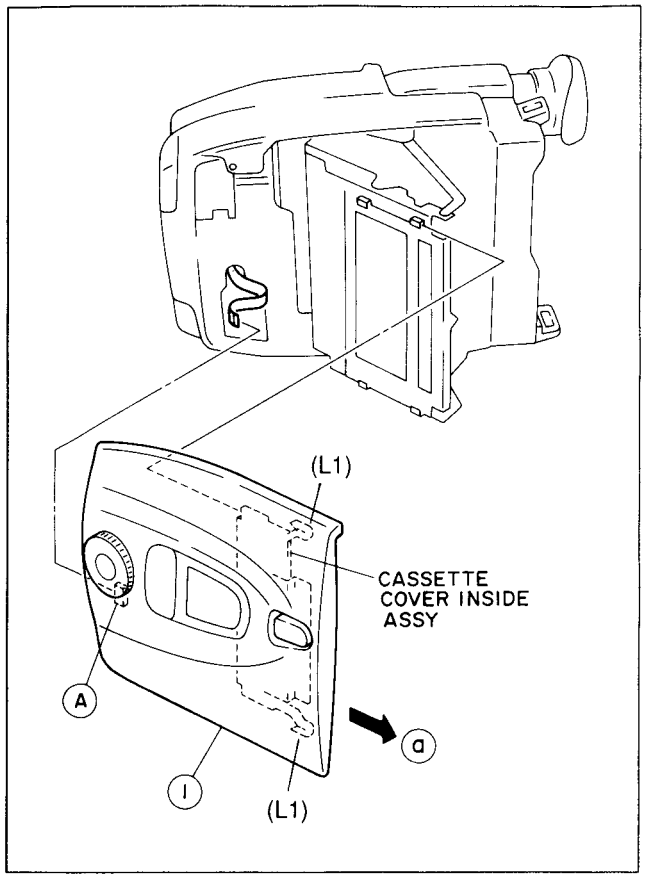


Fig. C1

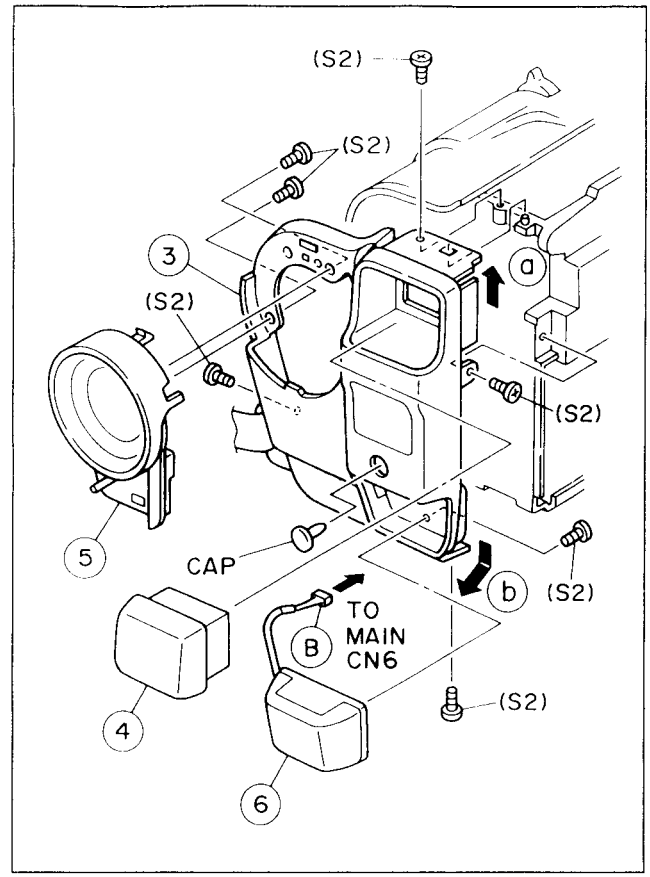


Fig. C3

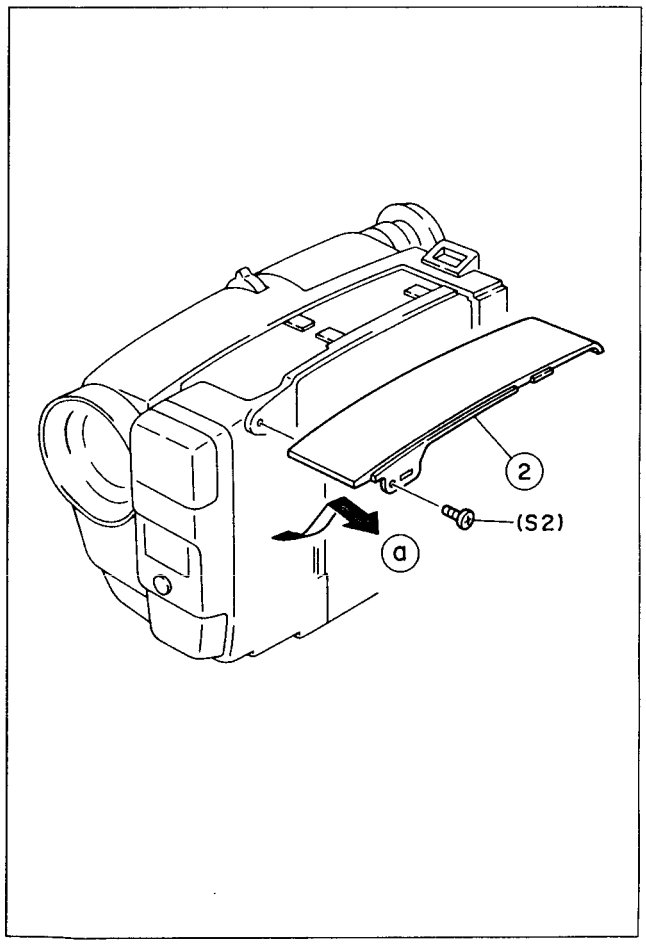


Fig. C2

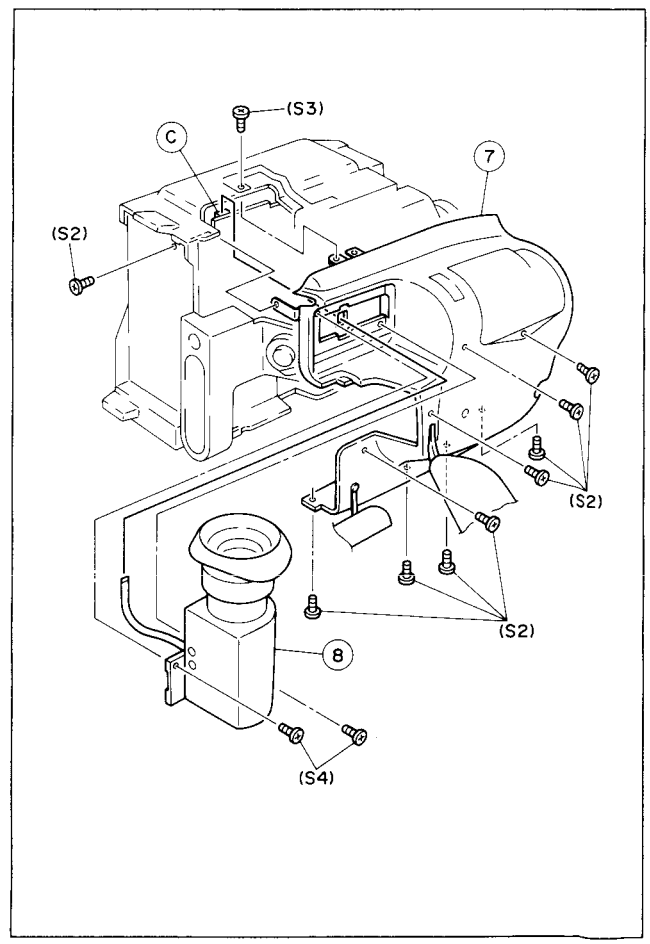


Fig. C4

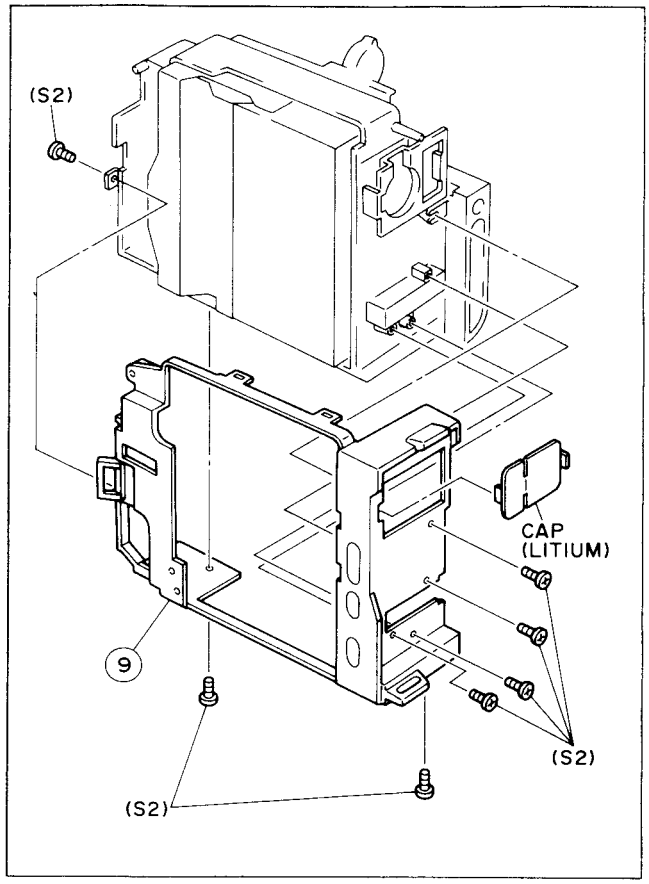


Fig. C5

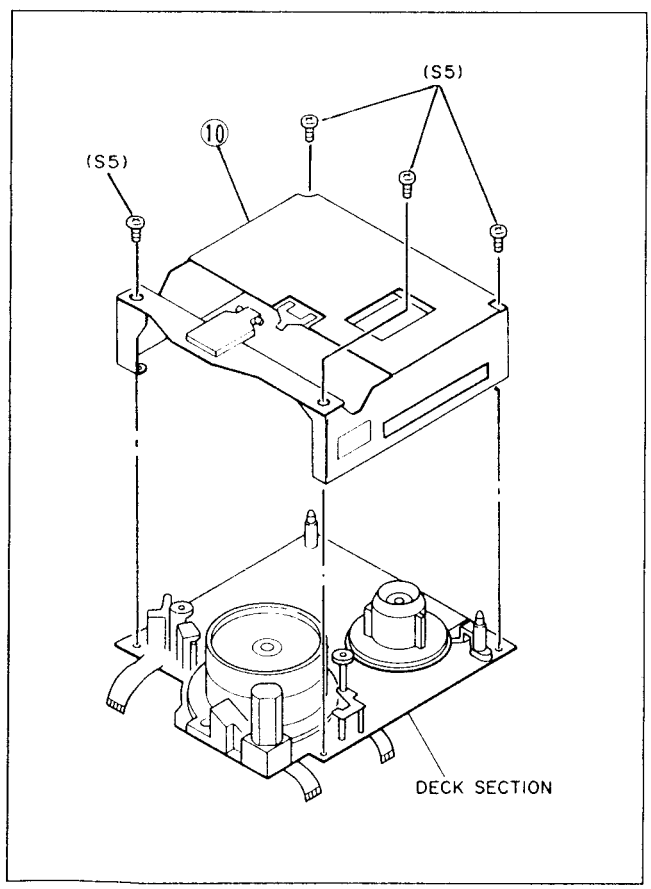


Fig. C6

Reference Notes:
<NOTE 1>
1. Use the AC Power Adaptor (AA-V11E) and supply the DC power to the unit.
   Open the cassette cover by pressing the EJECT switch.
2. Disconnect the DC power source.
3. Pull out either side of cassette cover inside assy and remove ① from the cassette housing in direction of arrow ⓐ, and disconnect connector Ⓐ.

<NOTE 2>
Destination of connectors
Note: *Three kinds of double-arrows in connection tables respectively show kinds of connector/wires.*
⬌ : Board to Board connector
⟺ : Flat wire
↔ : Wire

Con-nector	No. of Pins	Connector
Ⓐ	10	CAMERA OPERATION ⟺ MAIN CN7
Ⓑ	2	MIC ↔ MAIN CN6
Ⓒ	10	E VF ⟺ MAIN CN14

<NOTE 3>
Remove one screw (S2), pull ② in direction of front side and remove it in direction of the arrow ⓐ.

<NOTE 4>
Remove one cap (JACK) and remove four screws (S2).
Lift up the top of ③ in direction of arrow ⓐ and remove it in direction of the arrow ⓑ.

1.3 DISASSEMBLY/ASSEMBLY OF CAMERA PARTS

1.3.1 Disassembly flow chart

This flowchart indicates the disassembly step for the CAMERA parts and P.C. boards in order to gain access to item(s) to be serviced. When reassembling, perform the step(s) in reverse order. Bend, route and dress the flat cables as they were originally.

① CCD BOARD ASSY
↓
② OP BLOCK ASSY
↓
③ CCD IMAGE SENSOR
*Refer to section 1.6

1.3.2 Disassembly method

STEP /LOC NO.	PART	Fig. No.	REMOVAL	
			*UNLOCK/RELEASE/ UNPLUG/UNCLAMP/ UNSOLDER	Note
①	CCD BOARD ASSY	CA1	2(S6) *CONNECTOR Ⓐ-Ⓒ	<NOTE 1> <NOTE 2>
②	OP BLOCK ASSY	CA1	2(S7) *CONNECTOR Ⓓ	<NOTE 1>

List of Abbreviations:
4(S1) = 4 Screws (S1)
3(L1) = 3 Locking Tabs (L1)
3(SD1) = 3 Solder position (SD1)
3(K1) = 3 Positioning pins (K1)
2(P1) = 2 Springs (P1)
2(W1) = 2 Washers (W1)

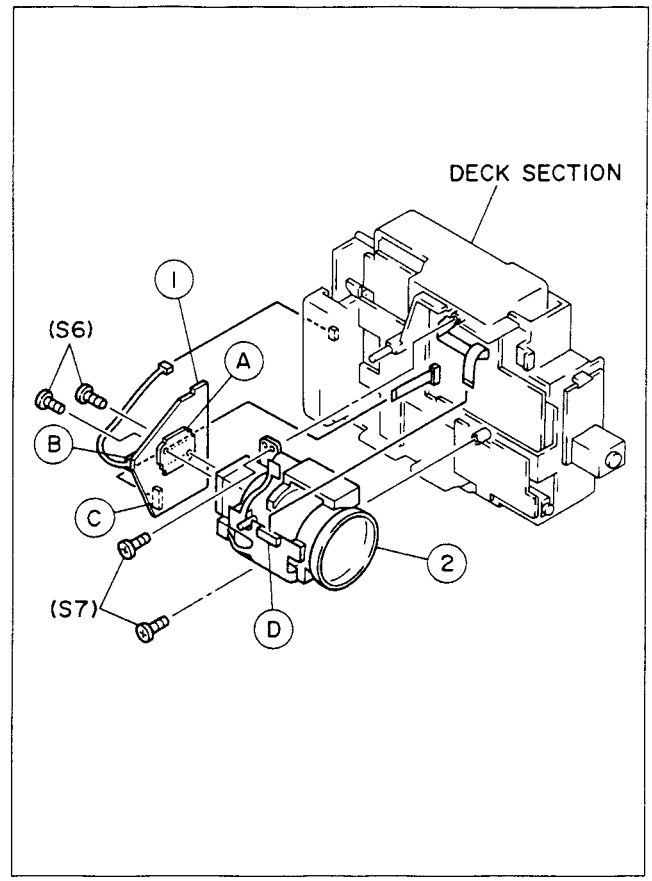


Fig. CA1

Reference Notes:
<NOTE 1>
Destination of connectors
Note: *Three kinds of double-arrows in connection tables respectively show kinds of connector/wires.*
⬌: Board to Board connector
⇔: Flat wire
↔: Wire

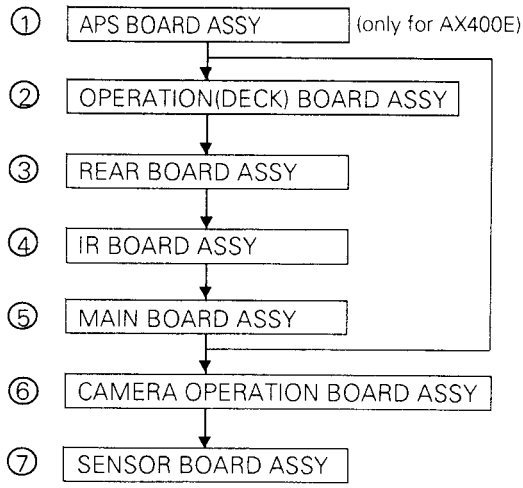
Connector	No. of Pins	Connector		
Ⓐ	16	CCD CN201	⬌	CCD SOCKET
Ⓑ	4	CCD CN203	↔	REAR CN3
Ⓒ	28	CCD CN202	⇔	MAIN CN12
Ⓓ	22	OP BLOCK	⇔	MAIN CN11

<NOTE 2>
1. Remove two screws (S6).
2. Disconnect connectors Ⓑ and Ⓒ.
3. Move the CCD board in the direction of the rear side. At that time, pay careful attention to pins (connector Ⓐ) of the CCD image sensor so as not to damage them.

1.4 DISASSEMBLY/ASSEMBLY OF DECK PARTS

1.4.1 Disassembly flow chart

This flowchart indicates the disassembly step for the DECK parts and P.C. boards in order to gain access to item(s) to be serviced. When reassembling, perform the step(s) in reverse order. Bend, route and dress the flat cables as they were originally.


① APS BOARD ASSY
(only for AX400E)
② OPERATION(DECK) BOARD ASSY
③ REAR BOARD ASSY
④ IR BOARD ASSY
⑤ MAIN BOARD ASSY
⑥ CAMERA OPERATION BOARD ASSY
⑦ SENSOR BOARD ASSY

1.4.2 Disassembly method

STEP /LOC NO.	PART	Fig. No.	REMOVAL	
			*UNLOCK/RELEASE/ UNPLUG/UNCLAMP/ UNSOLDER	Note
①	APS BOARD ASSY	D1	(S7) *CONNECTOR Ⓐ	<NOTE 1> only for AX400E
②	OPERATION (DECK) BOARD ASSY	D1	2(S7) *CONNECTOR Ⓑ	<NOTE 1>
③	REAR BOARD ASSY	D1	*CONNECTORS Ⓒ - Ⓔ	<NOTE 1>
④	IR BOARD ASSY	D1	*CONNECTOR Ⓕ	<NOTE 1>
⑤	MAIN BOARD ASSY	D1	2(S8), (S9), (S1) *FRAME ASSY *CONNECTORS Ⓖ - Ⓜ	<NOTE 1>
⑥	CAMERA OPERATION BOARD ASSY	D2 D3	3(S2), (S1) *PUSH BUTTON *CASSETTE COVER INSIDE ASSY	<NOTE 2>
⑦	SENSOR BOARD ASSY	D4	2(S10), 4(S11) WORM BRACKET	<NOTE 3>

List of Abbreviations:
- 4(S1) = 4 Screws (S1)
- 3(L1) = 3 Locking Tabs (L1)
- 3(SD1) = 3 Solder position (SD1)
- 3(K1) = 3 Positioning pins (K1)
- 2(P1) = 2 Springs (P1)
- 2(W1) = 2 Washers (W1)

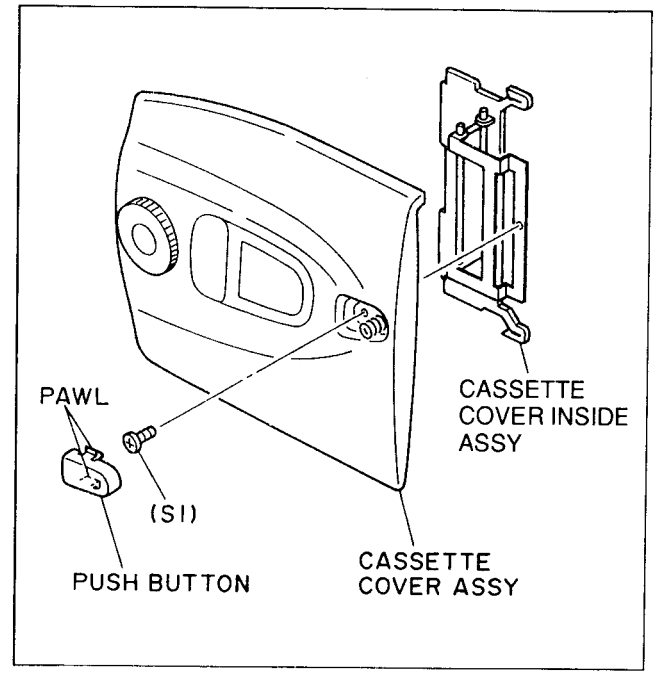


Fig. D2

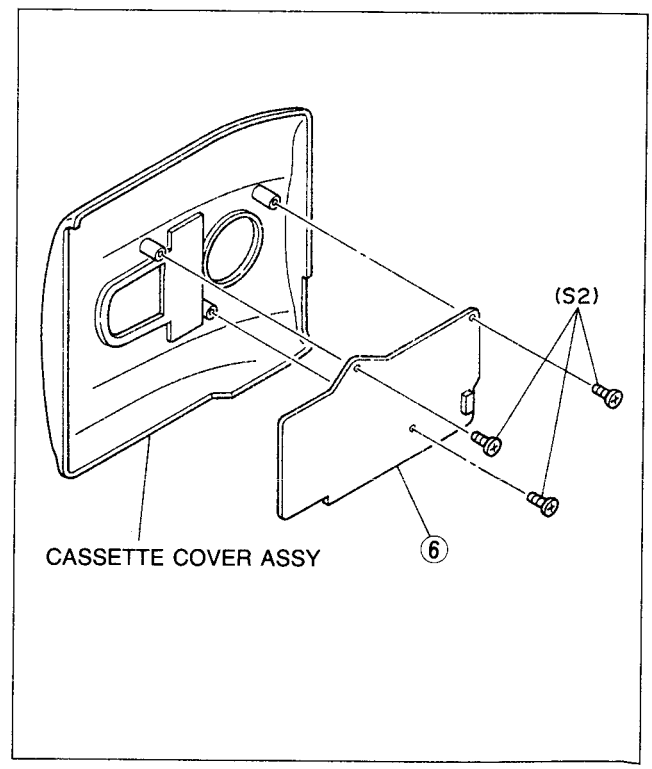


Fig. D3

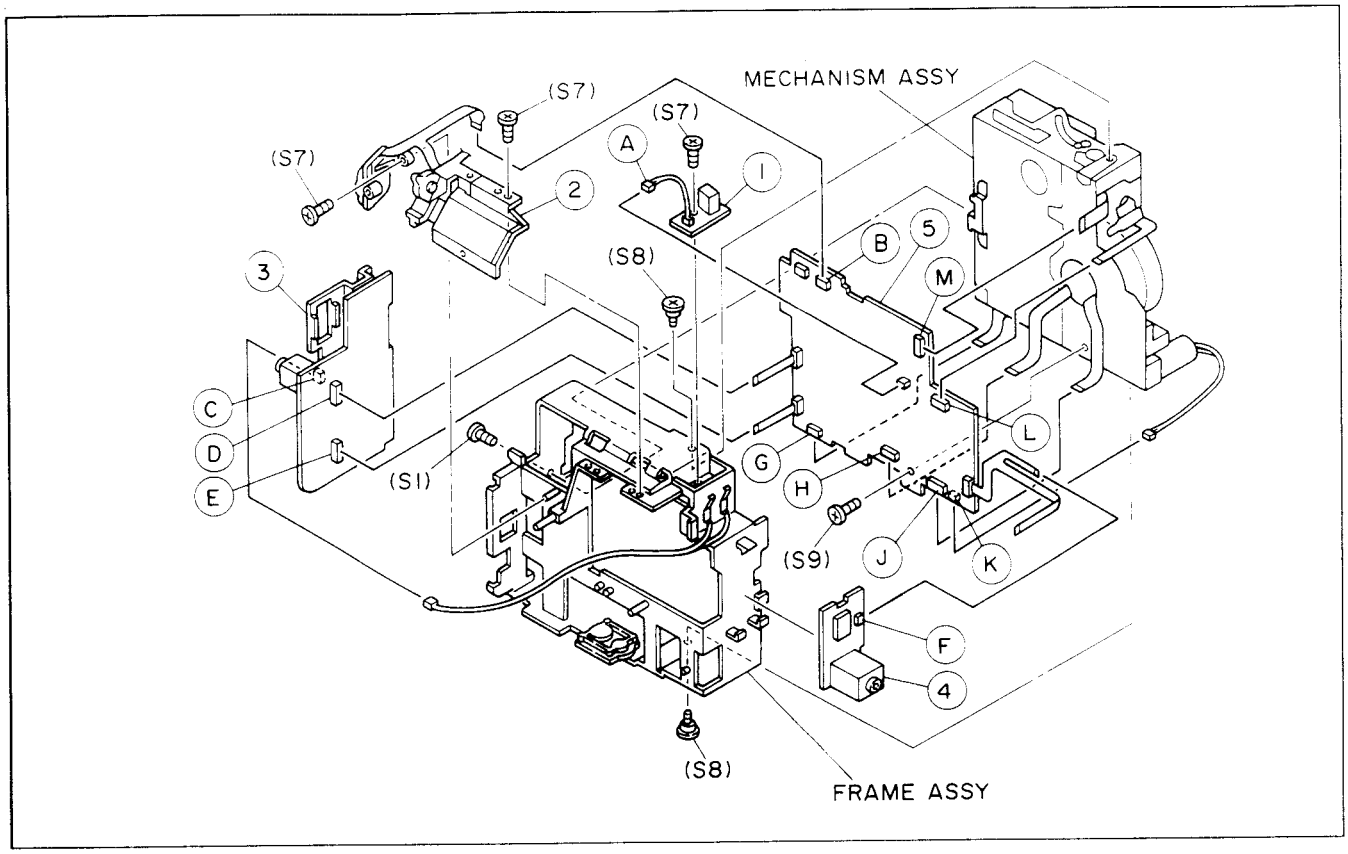


Fig. D1

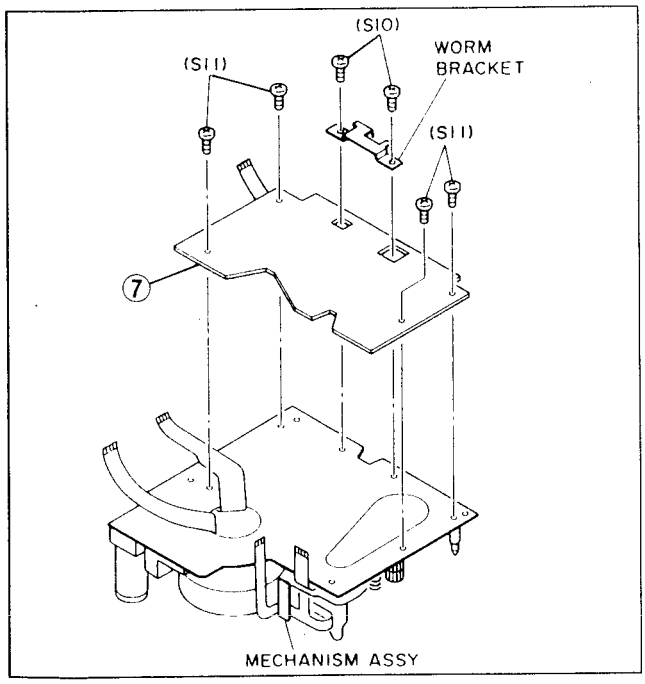


Fig. D4

Con-nector	No. of Pins	Connector		
Ⓐ	3	APS CN1	⟷	MAIN CN9
Ⓑ	13	OPERATION (DECK)	⟷	MAIN CN13
* Ⓒ	2	REAR CN4	⟷	LAMP
Ⓓ	22	REAR CN2	⟷	MAIN CN15
Ⓔ	18	REAR CN1	⟷	MAIN CN16
Ⓕ	6	IR	⟷	MAIN CN7
Ⓖ	14	MAIN CN1	⟷	SENSOR
Ⓗ	11	MAIN CN2	⟷	VIDEO HEAD
Ⓙ	18	MAIN CN3	⟷	DRUM MOTOR
Ⓚ	2	MAIN CN4	⟷	MODE MOTOR
Ⓛ	11	MAIN CN8	⟷	A/C HEAD
Ⓜ	18	MAIN CN10	⟷	CAPSTAN MOTOR

mark "*" is used only for AX400E.

Reference Notes:
<NOTE 1>
Destination of connectors
Note: *Three kinds of double-arrows in connection tables respectively show kinds of connector/wires.*
⬌ : Board to Board connector
⟺ : Flat wire
⟷ : Wire

<NOTE 2>
1. To detach the push button, release it from locking by three pawls and move it.
2. Remove one screw (S1) and remove the cassette cover inside assy. (Fig. D2)
3. Remove three screws (S2) and remove Ⓖ. (Fig. D3)

<NOTE 3>
When disconnecting, do it very carefully since the other side connector Ⓖ is attached to a flexible wire.

1.5 TO TAKE OUT CASSETTE TAPE

When the deck enters the Emergency mode with cassette tape loaded and it cannot be ejected by pressing the EJECT button, take out of the cassette housing according to the following procedure.

1. Disconnect the deck from the power source.
2. To detach the push button, release it from locking by three pawls by using (–) screw driver as shown in the magnified view Ⓐ and move it. (Fig. 1-5-1)
3. Remove one screw, slide the cassette cover assy and remove it in direction of arrow ⓐ from cassette housing. Remove the cassette cover assy in direction of arrow ⓑ and release the connector on camera operation board. (Fig. 1-5-1)
4. Remove wires of the mode control motor as shown in the magnified view Ⓑ and connect jumping wires to the terminals. (Fig. 1-5-2)
5. Holding the cassette housing by hand, connect the jumping wires to battery and set the mechanism for unloading as it is in the Eject mode. In the condition, turn the take-up gear (see the magnified view Ⓒ) in the direction of the arrowⓒ (toward the drum) to wind the tape. Checking up whether the tape is damaged or not, stop holding of the cassette housing by hand. (Fig. 1-5-2)

Note: *If the mechanism comes into the unloading mode as the cassette tape is not held by hand, it results in tape damage.*

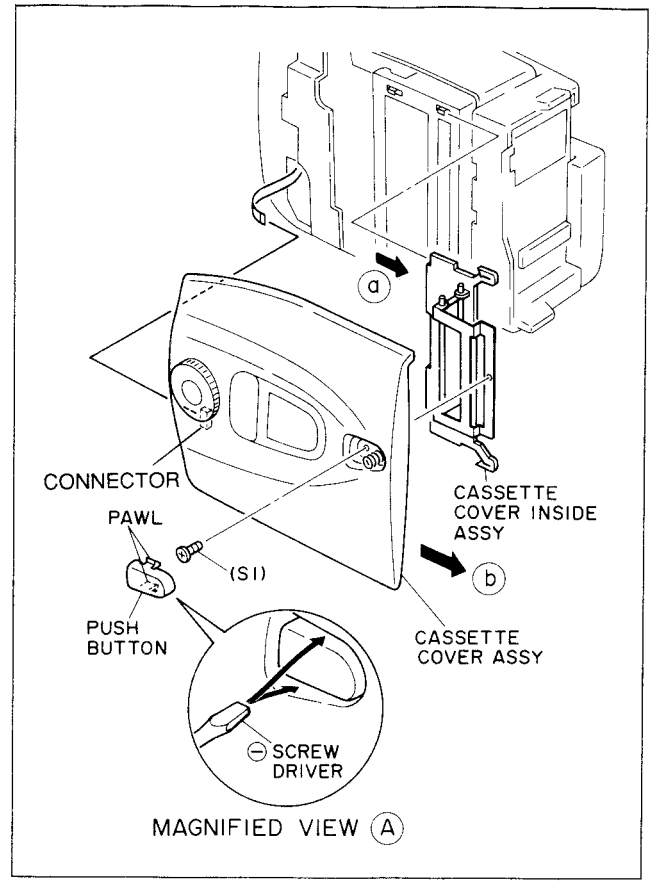
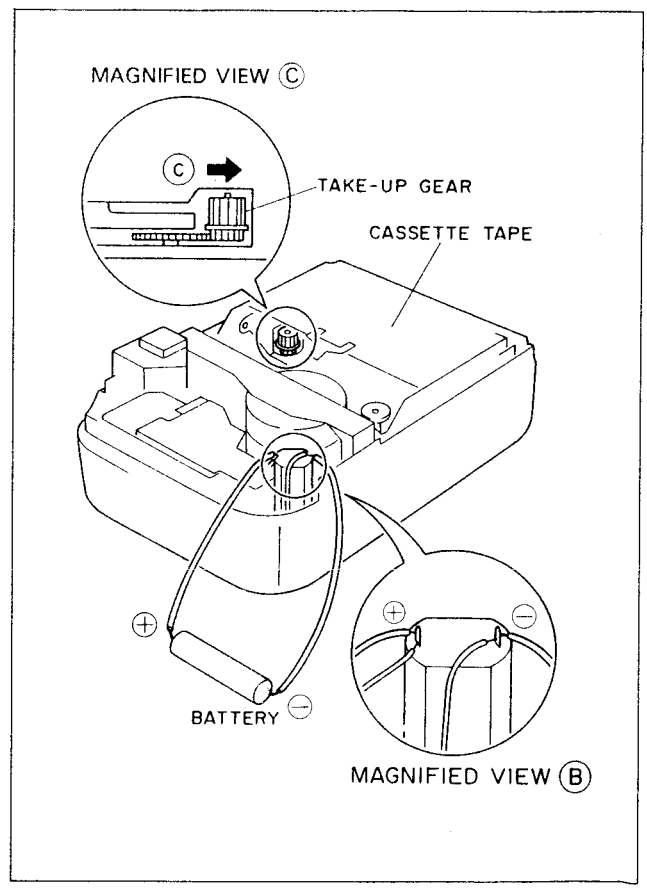


Fig. 1-5-1



Fiig. 1-5-2 CASSETTE TAPE

1.6 REPLACEMENT OF CCD IMAGE SENSOR

Notes:

- *Pay the most careful attention to the transparent glass and optical LPF of the CCD image sensor so a not the soil and damage them. If something is soiled with finger-prints, etc., gently clean it with silicon-processed paper/cloth or chamois.*
- *When the CCD image sensor is shipped from the factory, there are protection seals applied onto the transparent glass. Leave the protector as it is, and take it off just before assembling the CCD image sensor to the OP block.*

1.6.1 Removal of CCD image sensor

1. Remove two screws Ⓐ securing the CCD base, and disassemble the CCD spacer, the optical LPF, spacer rubber.

1.6.2 Installation of new CCD image sensor

1. Remove the protection seal from a new CCD image sensor. Next, put the spacer rubber, optical LPF, CCD spacer on the CCD image sensor as they are piled up in this order. At that time, make sure of orientation of each item refering to the following table (see Fig. 1-6-1).

Part Name	Orientation
CCD image sensor	Mark is on the right viewed as indicated by the arrow ⓐ.
Spacer rubber	IC side is horizontal.
Optical LPF	Marks are on the left and bottom viewed as indicated by the arrow ⓐ.

2. Fix the CCD base to OP block with the two screws Ⓐ. At that time, be careful of the orientation.
3. After completion of all P.C. boards to the camera section, observe the monitor to confirm no vignetting caused by the bodytube, rings, lens hood, etc. If no vignetting is observed, it can be said that image's parallel, horizontality and centering are correct.

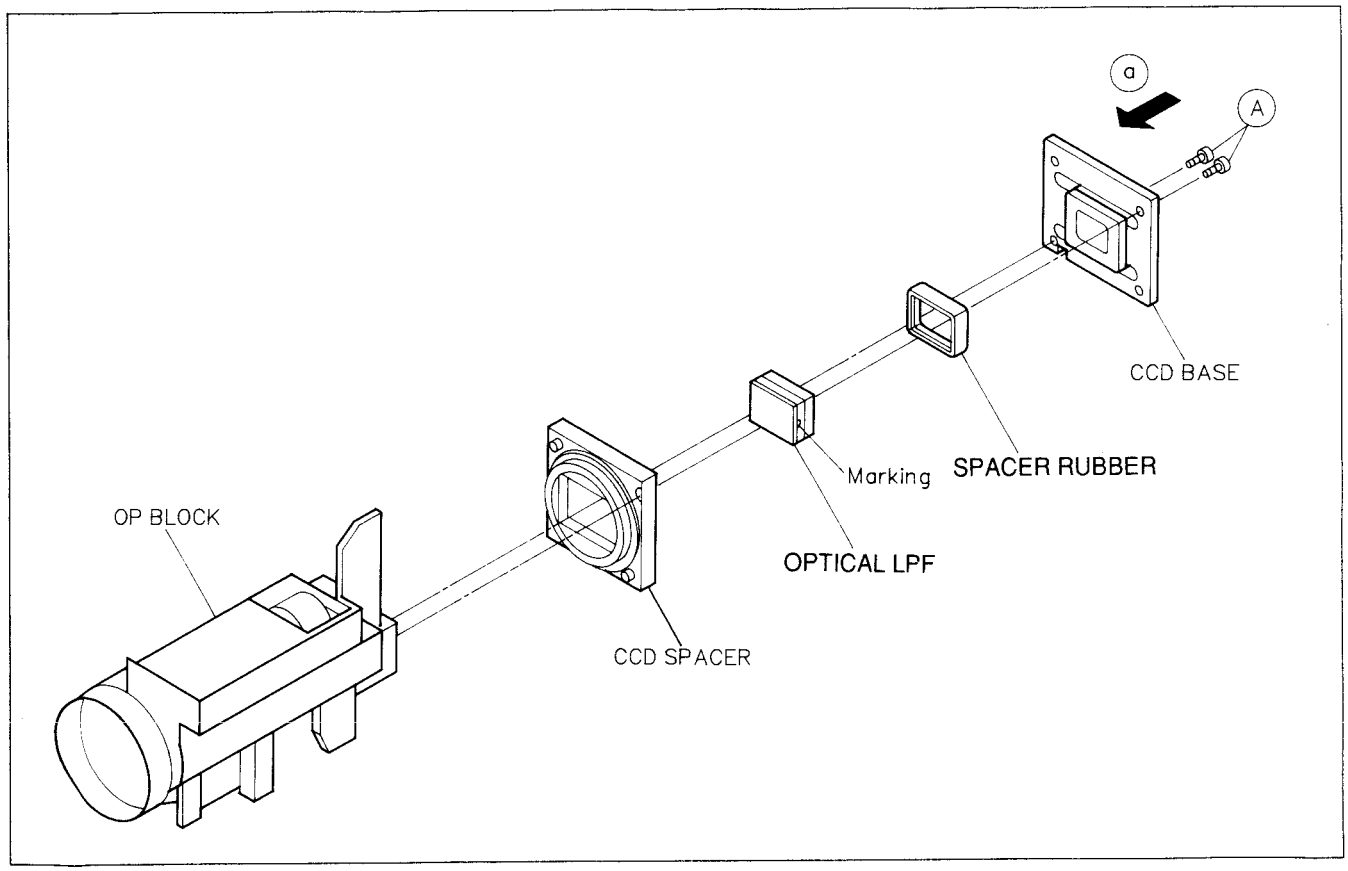


Fig. 1-6-1 CCD image sensor

1.7 EXTENSION CABLE CONNECTION (YTU93076A)

Connector	Pins	Connection			Part Number	Description
①	6	MAIN CN7	↔	IR	YTU94077-6 YTU94074-6	
②	10	MAIN CN14 MAIN CN7	↔ ↔	EVF CAMERA OPERATION	YTU94077-10 YTU94074-10	
③	11	MAIN CN8	↔	A/C HEAD	YTU94077-11 YTU94074-11	
④	13	MAIN CN13	↔	DECK OPERATION	YTU94077-13 YTU94074-13	
⑤	14	MAIN CN1	↔	SENSOR	YTU94077-14 YTU94074-14	
⑥	18	MAIN CN16 MAIN CN10	↔ ↔	REAR CN1 CAPSTAN MOTOR	YTU94077-18 YTU94074-18	
⑦	22	MAIN CN11 MAIN CN15	↔ ↔	OP BLOCK REAR CN2	YTU94077-22 YTU94074-22	
⑧	28	MAIN CN12	↔	CCD CN202	YTU94077-28 YTU94074-28	
⑨	4	CCD CN203	↔	REAR CN3	YUJ40095A-4	

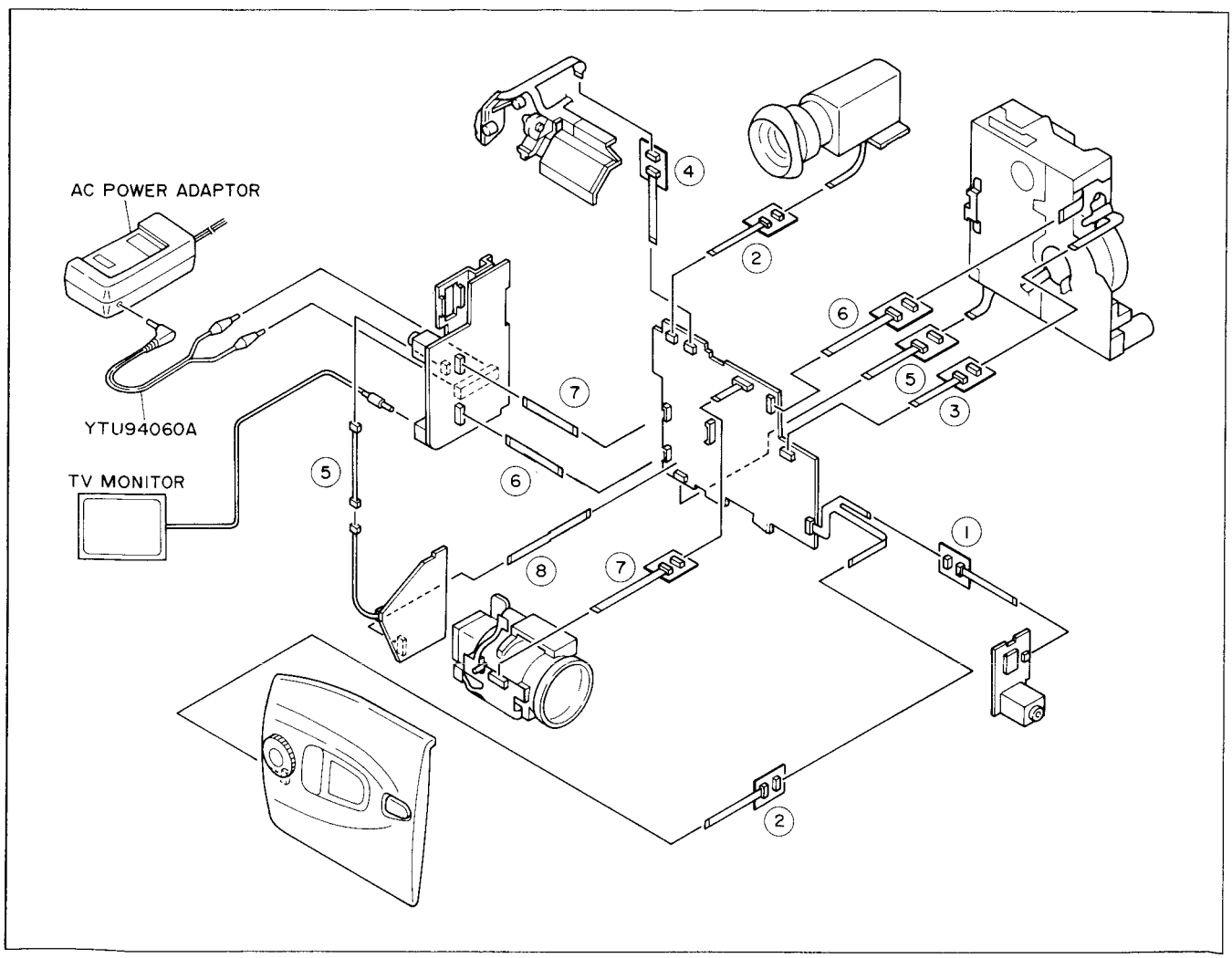


Fig. 1-7-1 EXTENSION CABLE CONNECTION

SECTION 2
MECHANISM ADJUSTMENT

2.1 SERVICE CAUTIONS

2.1.1 Precautions

1. Before disassembling/re-assembling the set as well as soldering parts, make sure to disconnect the power cable.
2. When disconnecting/connecting connectors, pay enough attention to wiring not to damage it.
3. When installing parts, be careful not to do with other parts as well as not to damage others. (Pay the most careful attention to the upper drum assy and tape transport mechanism.)

2.1.2 How to read the disassembly and assembly (For Mechanism Parts)

① : Order of steps in Procedure
When reassembling, perform the step(s) in the reverse order. These numbers are also used as the identification (location) No. of parts Figures.

② : Part to be removed or installed.

③ : Location of part.
T = Top
B = Bottom

④ : Fig. No. showing Procedure or Part Location.
M = Mechanism

⑤ : Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped or unsoldered.
P = Spring
W = Washer
S = Screw
* = Unhook, unlock, release, unplug or unsolder.

⑥ : Adjustment information for installation.
(+) = Refer to Exploded Views for Lubrication information.

2.1.3 Main screws and washers to deal with disassembly/assembly

Table 2-1-1 lists screws and washers by their symbols which correspond to those shown in figures of this section "Disassemby and Assembly".

SYMBOL OF WASHER	SHAPE	PART NUMBER
S1		SPSH1730M
S2		SPSH1740Z
S3		YQ43816
S4		SSSH1730M
S5		SPSH1740M
S6		SPSH1720M

SYMBOL OF WASHER	SHAPE	PART NUMBER
W1		PQM30017-27
W2		Q03093-835
W3		PQM30017-25

Table 2-1-1

(For Mechanism Parts)

STEP/LOC. No.	PART		Fig. No.	REMOVAL *UNHOOK/UNLOCK /RELEASE/UNPLUG /UNSOLDER	INSTALLATION ADJUSTMENT CONDITION NOTE
①	REEL DISK (SUP)	T	M1	(W1), (W2)	-
②	IMP. ROLLER ASSY	T	M1	(S1)	-
③	TENSION ARM ASSY	T	M1	(W1)	-
④	SLANT ARM ASSY	T	M1	(W1)	-
⑤	CANCEL LEVER ASSY	T	M2	(W1)	-
⑥	EJECT LEVER ASSY	T	M2	(W2)	-
⑦	CASSETTE BLOCK	T	M2	(S13)	-
↑ ①	↑ ②	↑ ③	↑ ④	↑ ⑤	↑ ⑥

2.2 DISASSEMBLY/ASSEMBLY OF MECHANISM PARTS

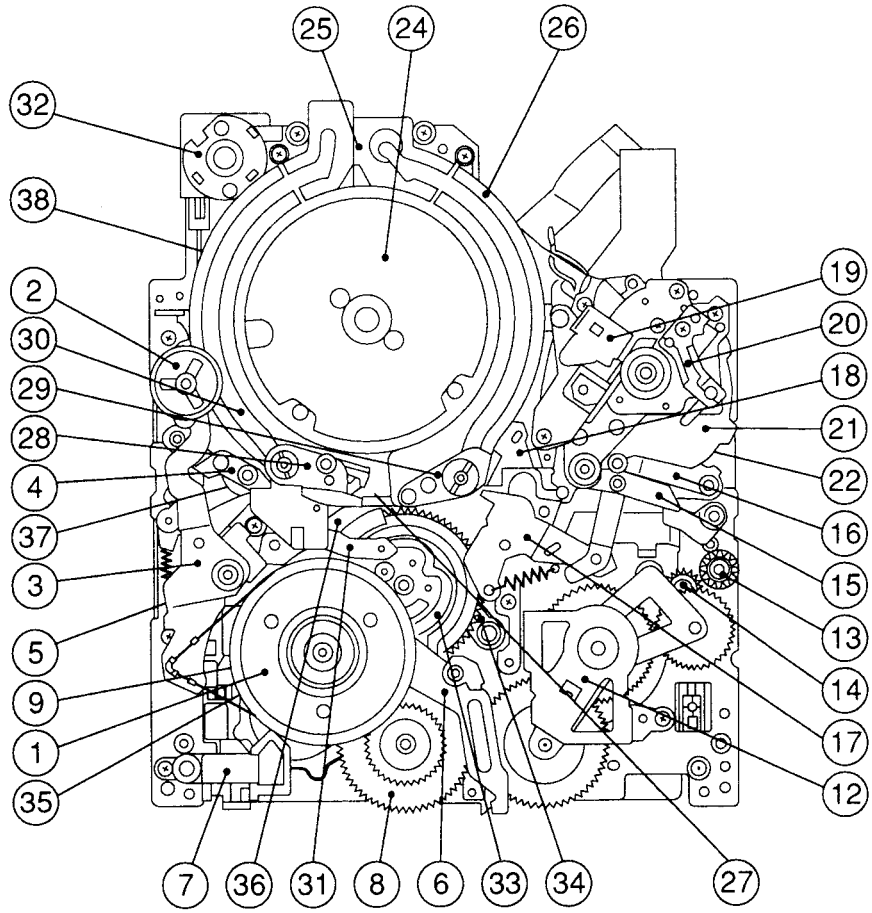
This procedure starts with the condition that the cabinet parts and deck parts. Also, all the following procedures for adjustment and parts replacement should be performed in STOP mode. When reassembling, perform the step(s) in the reverse order.

STEP/LOC. No.	PART		Fig. No.	REMOVAL *UNHOOK/UNLOCK /RELEASE/UNPLUG /UNSOLDER	INSTALLATION ADJUSTMENT CONDITION NOTE
①	REEL DISK (SUP)	T	M1	(W1), (W2)	–
②	IMP. ROLLER ASSY	T	M1	(S1)	–
③	TENSION ARM ASSY	T	M1	(W1), (P1)	–
④	SLANT ARM ASSY	T	M1	(W1), (P2)	–
⑤	CANCEL LEVER ASSY	T	M2	(W1)	–
⑥	EJECT LEVER ASSY	T	M2	(W1)	–
⑦	CASSETTE GUIDE (L) ASSY	T	M2	(S2)	–
⑧	SUPPLY CLUTCH ASSY	T	M2	(W1)	–
⑨	WHEEL GEAR	T	M2	(W1)	See, Adjustment procedure for Section 2.4
⑩	SENS BOARD ASSY	B	M3	4(S1)	–
⑪	TIMING BELT	B	M3	–	–
⑫	CENTRE PULLEY UNIT	T/B	M3	2(S1)	–
⑬	TU GEAR	T	M3	(W1)	–
⑭	BRAKE SUB GEAR	T	M3	(W1)	–
⑮	P.R ARM ASSY	T	M3	(W3)	–
⑯	TU GUIDE ARM ASSY	T	M3	(W1)	–
⑰	LINK ARM ASSY	T	M4	(W3)	–
⑱	LED GUIDE	T	M4	(S1)	–
⑲	A/C HEAD UNIT	T	M4	2(S3)	–
⑳	SLANT POLE BASE ASSY	T	M5	(S3)	–
㉑	CAP MOTOR ASSY	T	M5	3(S3)	–
㉒	MOTOR BASE	T	M5	2(S2), (S4)	–
㉓	BRUSH	B	M6	(S6)	–
㉔	DRUM FINAL	T/B	M6	2(S2)	–
㉕	CATCHER	T	M6	2(S2)	–
㉖	GUIDE RAIL	T	M6	8(S1)	–
㉗	DRUM SPACER	T	M6	2(S2)	–
㉘	POLE BASE (SUP)	T	M6	–	–
㉙	POLE BASE (TU)	T	M6	–	–
㉚	COVER PLATE	T	M7	–	–
㉛	DRIVE LEVER ASSY	T	M7	–	–
㉜	MOTOR BRACKET ASSY	T	M7	3(S2)	–
㉝	CONTROL CAM	T	M8	(W3)	See, Adjustment procedure for Section 2.4
㉞	LINK LEVER ASSY	T	M8	–	–
㉟	MIDDLE GEAR	T	M8	–	–
㊱	LOADING GEAR(T) ASSY	T	M8	(W1)	See, Adjustment procedure for Section 2.4
㊲	LOADING GEAR(S) ASSY	T	M8	(W1)	–
㊳	LOADIDNG RING ASSY	T	M8	4(S2)	See, Adjustment procedure for Section 2.4

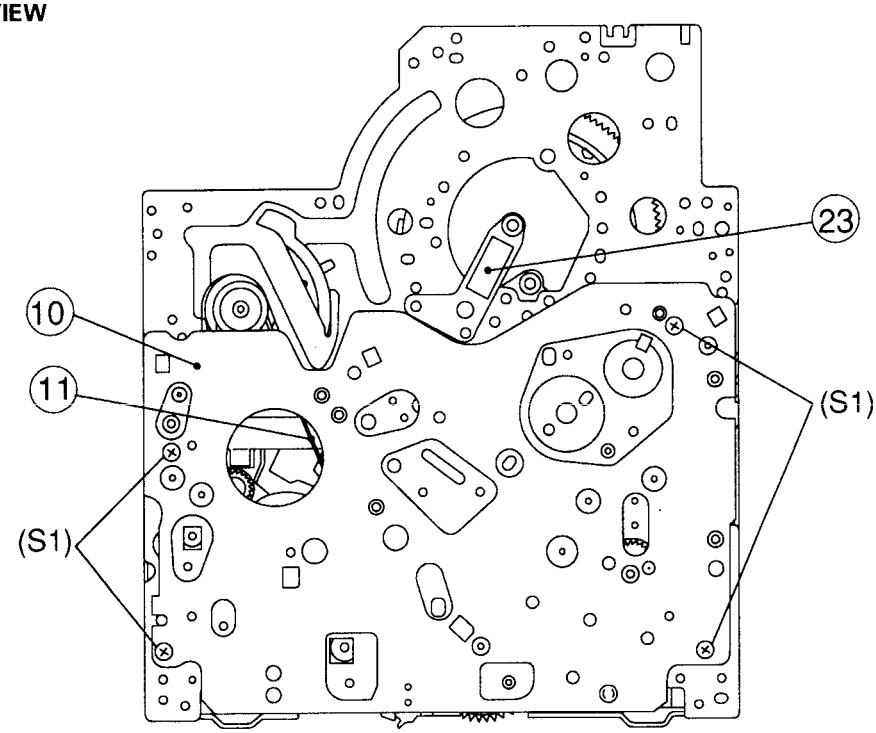
List of Abbreviations:

4(S1) = 4 Screws (S1)
3(L1) = 3 Locking Tabs (L1)
3(SD1) = 3 Solder position (SD1)
3(K1) = 3 Positioning pins (K1)
2(P1) = 2 Springs (P1)
2(W1) = 2 Washers (W1)

TOP VIEW



BOTTOM VIEW



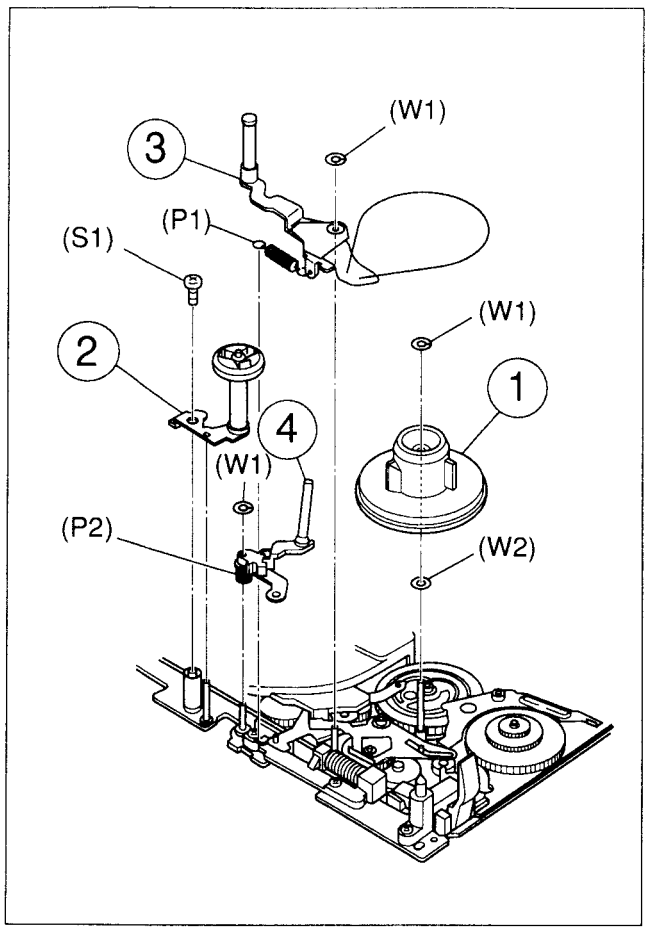


Fig. M1

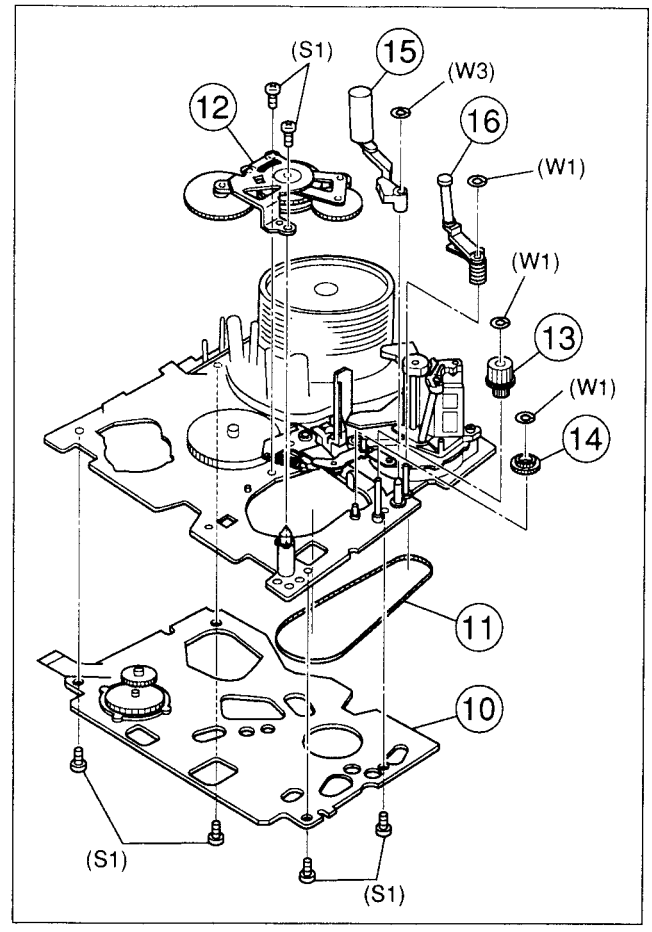


Fig. M3

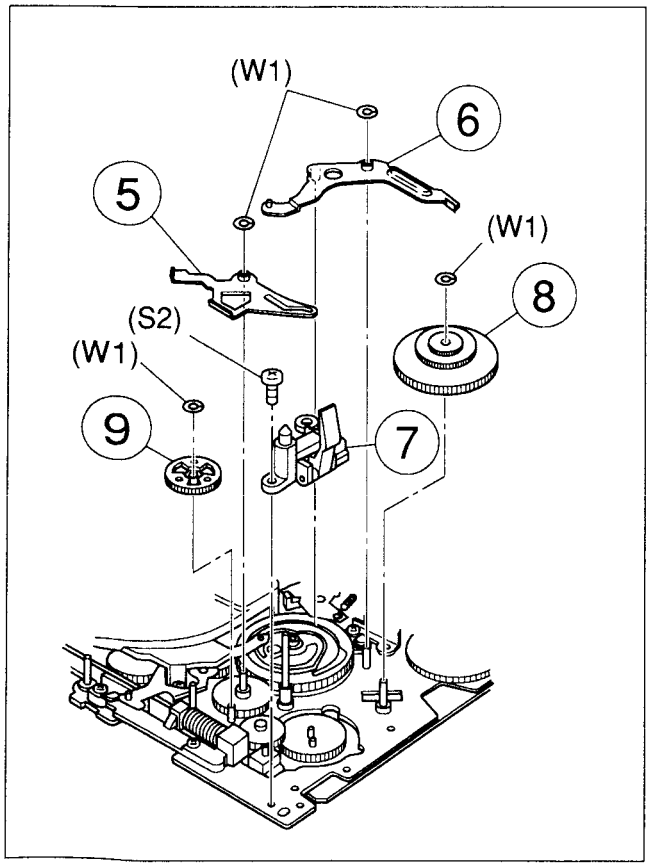


Fig. M2

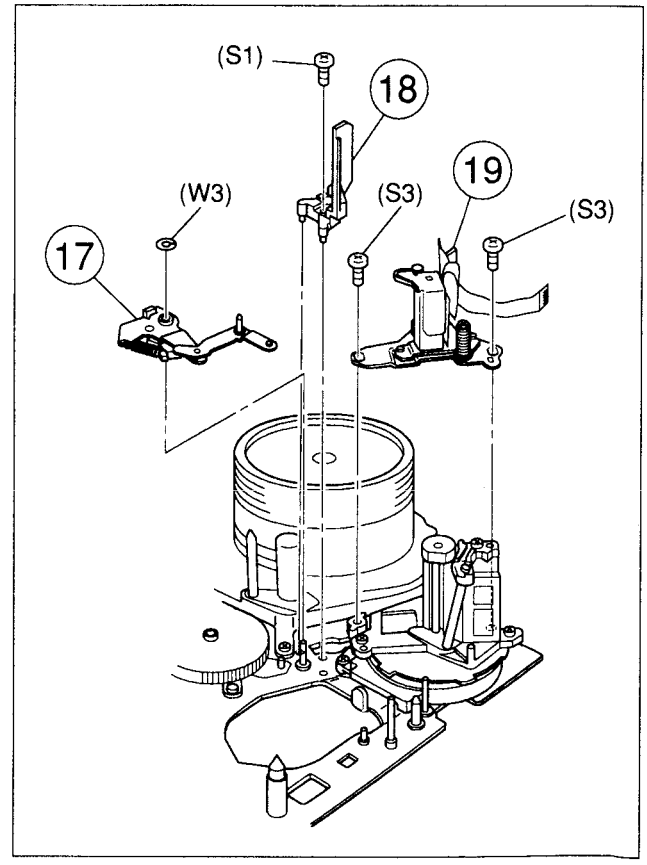


Fig. M4

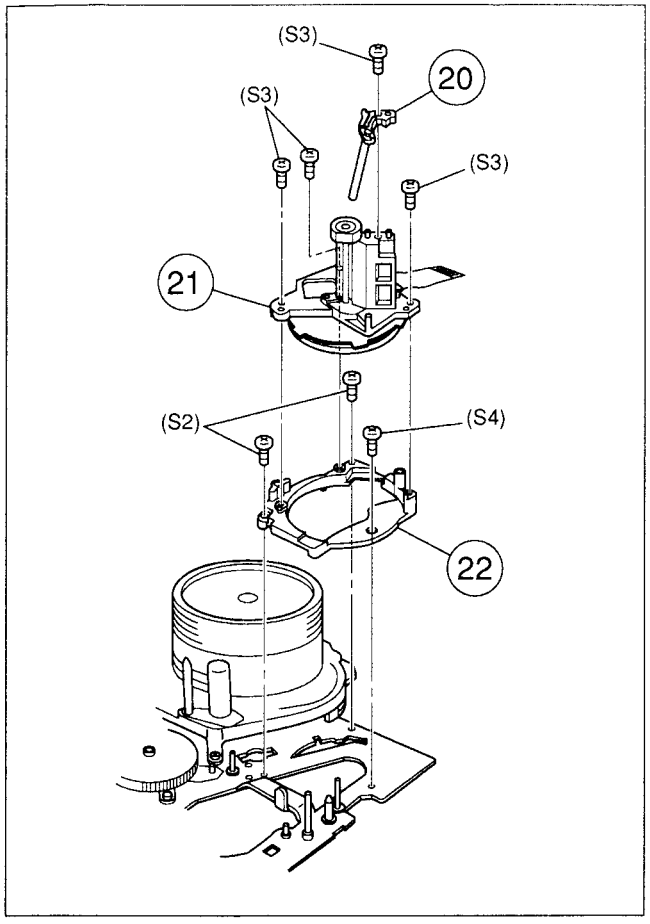


Fig. M5

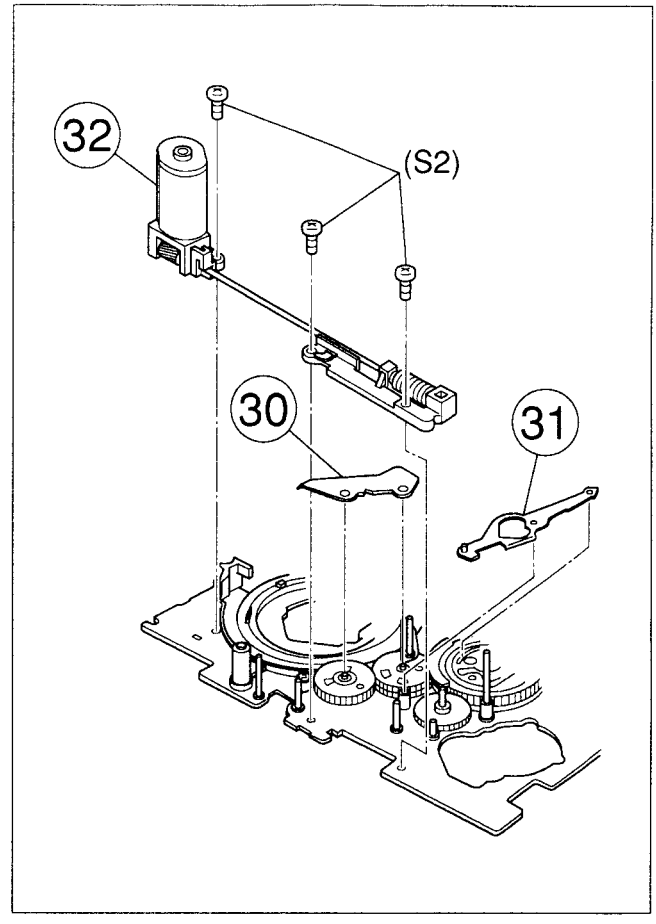


Fig. M7

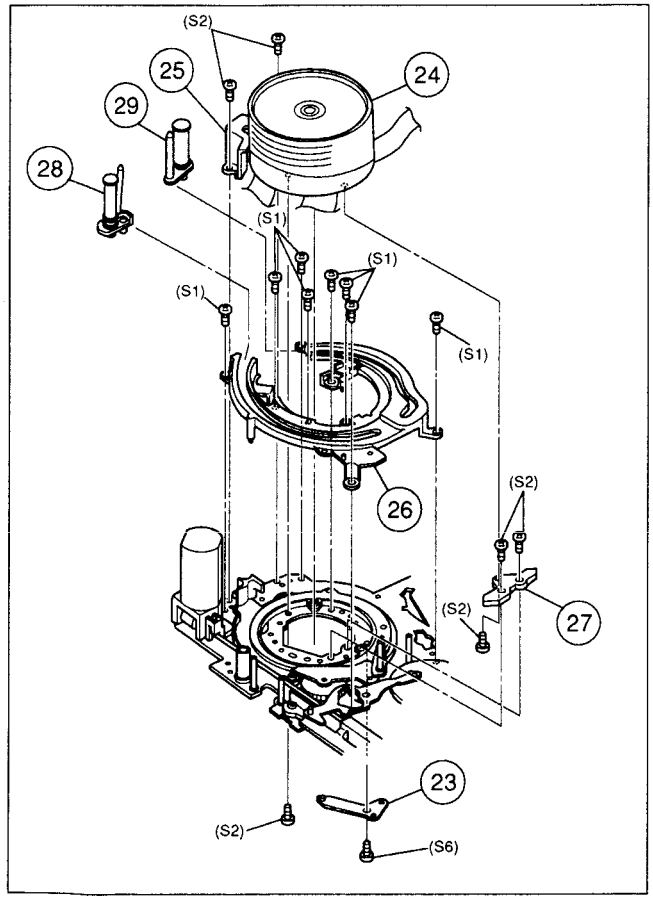


Fig. M6

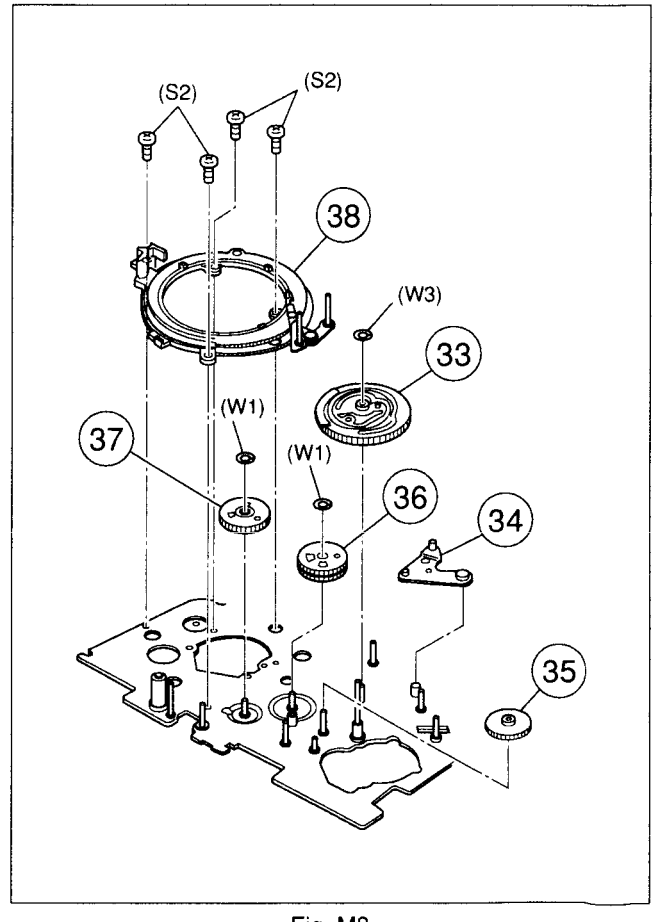


Fig. M8

2.3 REPLACEMENT OF UPPER DRUM

Note: *Be very careful not to touch any hand of a new upper drum as well as not to damage the drum.*

2.3.1 Removal of upper drum

1. Carefully unsolder at 10 points shown in Fig. 2-3-1 on the UPPER DRUM board.

   Note: *If solder is not completely removed, it may cause damage of the head pins when the upper drum is removed.*

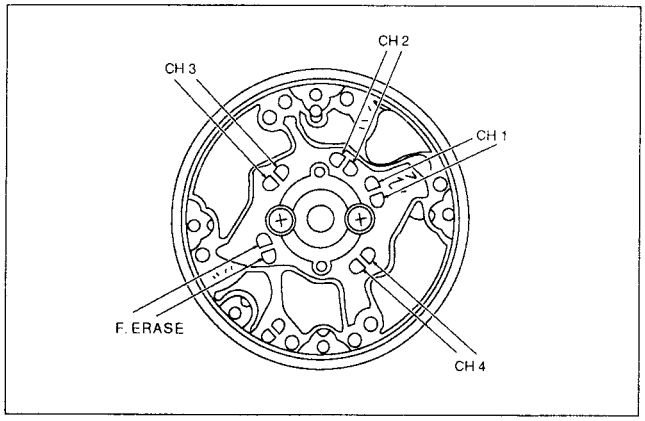


Fig. 2-3-1 Upper drum replacement (1)

2. Remove two screws and draw out the upper drum in the direction of the arrow.

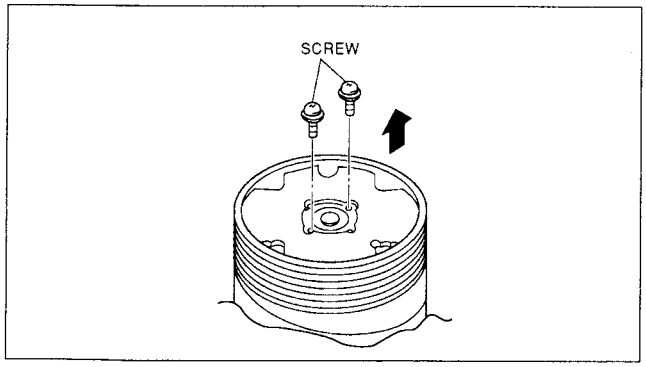


Fig. 2-3-2 Upper drum replacement (2)

3. When it is hard to remove the upper drum, set the upper drum removal tool (YTU94031A) with the screws which are once removed in the step 2, and tighten the center screw to remove it easily.

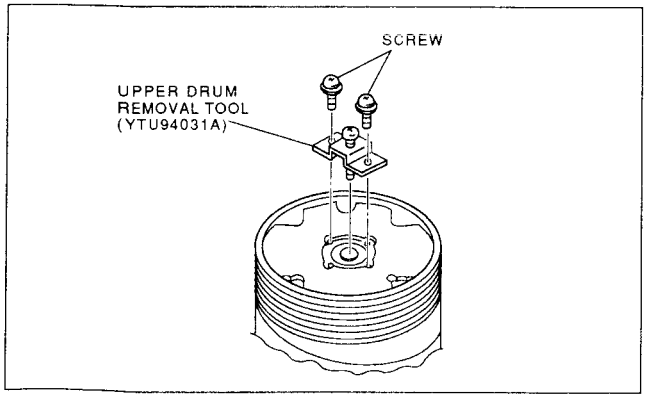


Fig. 2-3-3 Upper drum replacement (3)

2.3.2 Installation of new upper drum

1. Before installing a new upper drum, insert a soldering iron (50 W) into the hole of the upper drum and heat it for about 3 to 5 minutes to expand it.

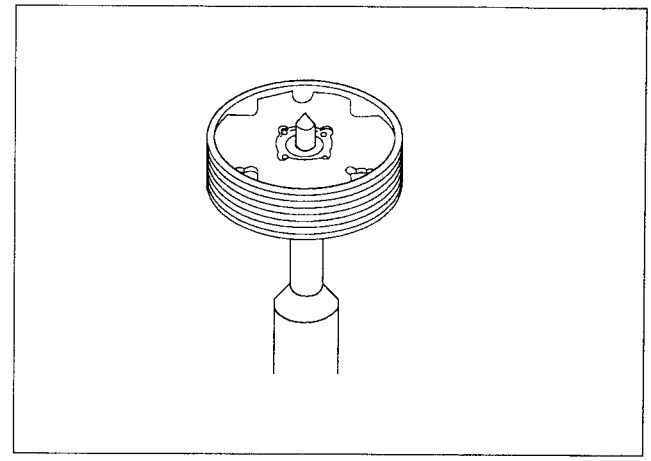


Fig. 2-3-4 Upper drum replacement (4)

2. Install the new upper drum so that its arrow marking is positioned at an angle of 140° to the rotary transformer's mold (having no relay pin) of the lower drum.

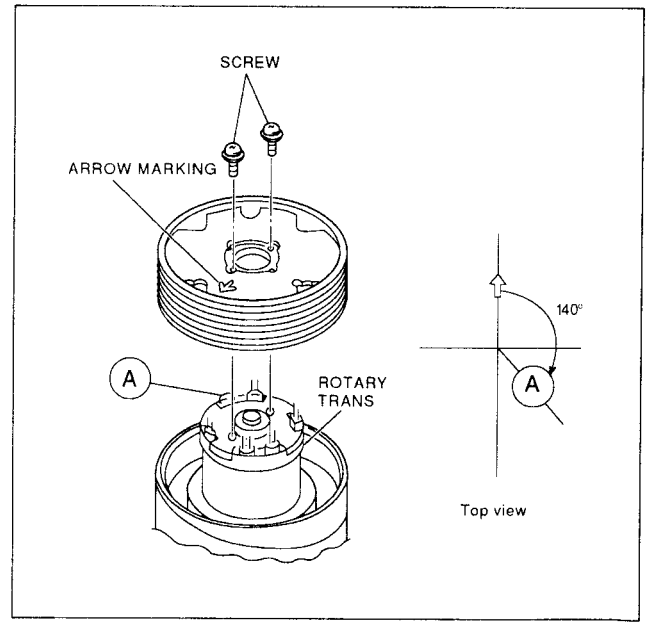


Fig. 2-3-5 Upper drum replacement (5)

3. Tighten the screws lightly first, then, alternately tighten them gradually as the upper drum is cooled.
4. After replacement finishes, make sure to check up and deck section adjust.

2.4 CHECKUP AND ADJUSTMENT OF MECHANISM PHASE

Note: *Pay careful attention to the installing order and phase of mechanism parts of the loading system.*

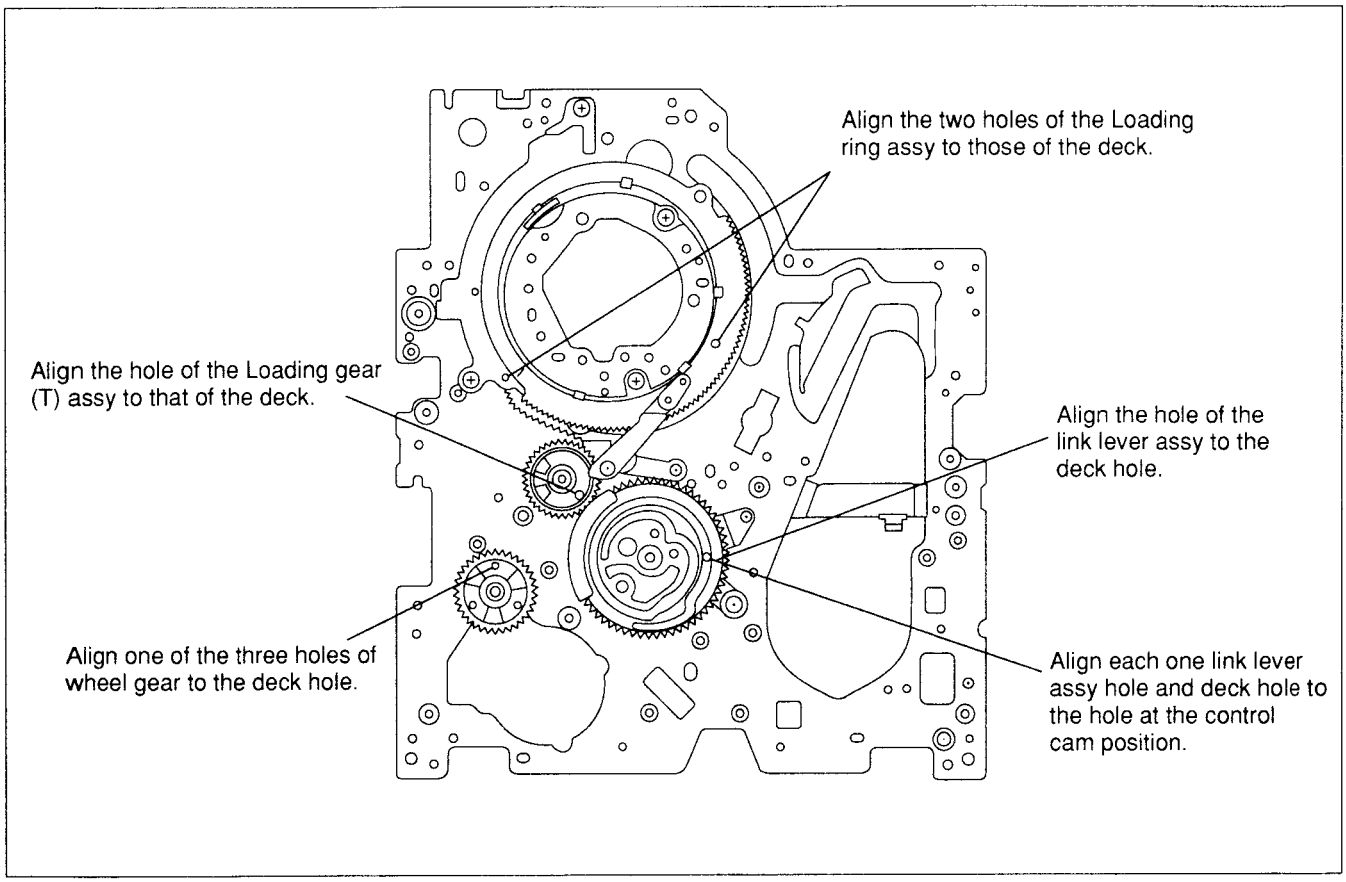

Align the two holes of the Loading ring assy to those of the deck.
Align the hole of the Loading gear (T) assy to that of the deck.
Align the hole of the link lever assy to the deck hole.
Align one of the three holes of wheel gear to the deck hole.
Align each one link lever assy hole and deck hole to the hole at the control cam position.

Fig. 2-4-1 TOP OF MAIN DECK

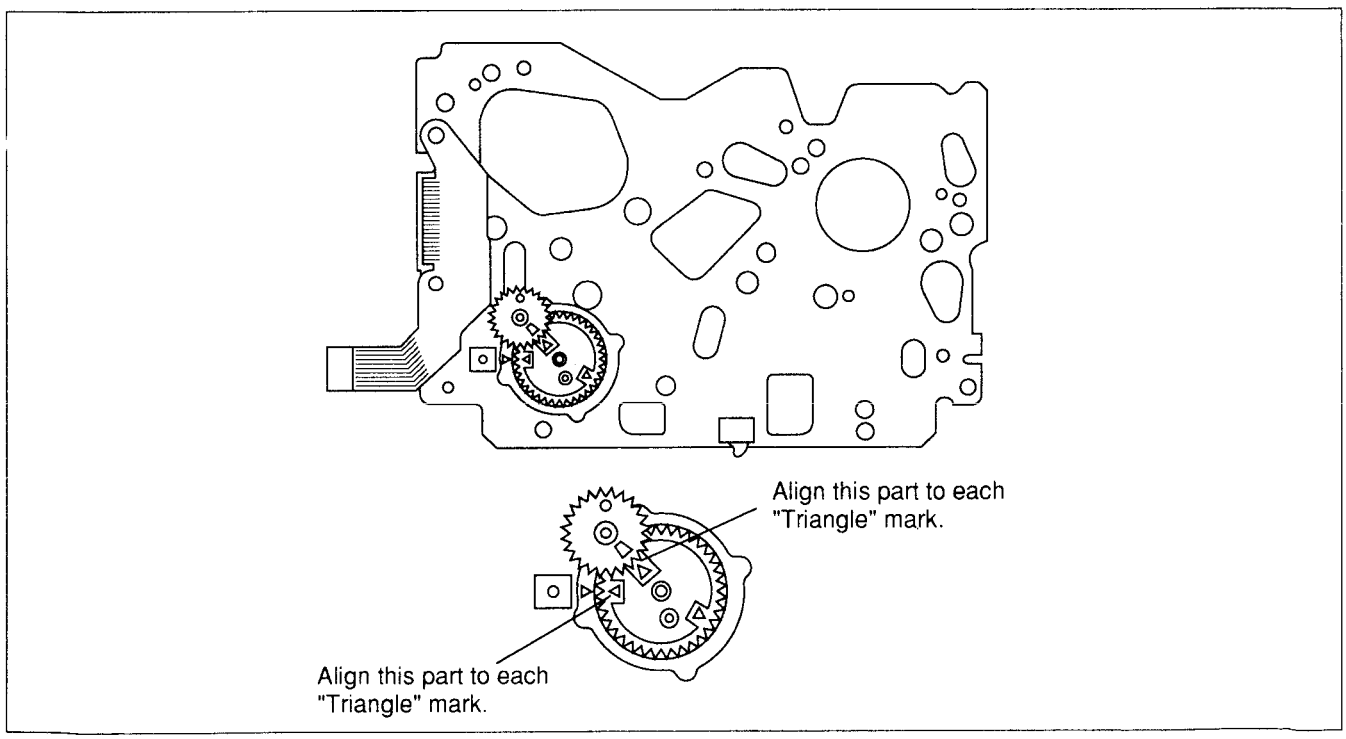


Fig. 2-4-2 SENSOR BOARD

2.5 TAPE TRANSPORT ADJUSTMENT

In most cases the deck section is in need electrical adjustment, it results from replacement of worm mechanical parts or video heads. In the event of malfunction with electrical circuits, troubleshouting with the aid of proper test instruments most be done first, and then commence necessary repair, replacement and adjustment, etc.

2.5.1 Required adjustment tools

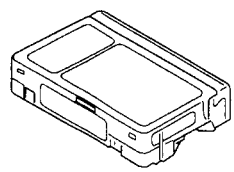
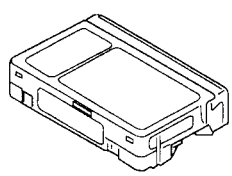
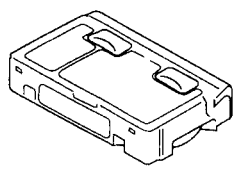
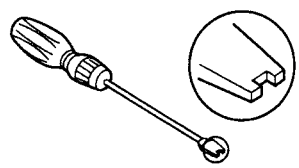
Alignment tape for SP interchangeability (MHPE-C)	Alignment tape for LP interchangeability (MHPE-LC)
	
Cassette torque meter PUJ50431-2	Roller driver PTU94002
	

Table 2-5-1

2.5.2 Back tension

1. Set a cassette torque meter onto the deck and measure the back tension in standard REC mode to confirm that the back tension is 13 – 20 gr-cm.
2. If not, replace the tension band.
   When the value widely fluctuates in the measurement, replace the supply reel disk.
3. With the cassette torque meter, confirm that the play torque is 15 – 25 gr-cm.
   If necessary, replace the center pully unit..

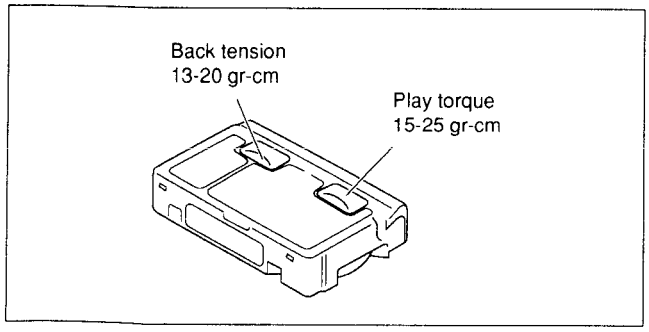


Fig. 2-5-1 Cassette torque meter

2.5.3 Tape pattern

1. Observe signal at pin 2 of CN20 (V. TP FM) with external trigger from pin 5 of CN20 (V. H. FF) on the MAIN board.
2. Play back the SP stairstep signal of the alignment tape, and maximize the FM waveform by the tracking button.
3. Set the tracking control to the centre position by simultaneously pressing the tracking (–) and (+) buttons and maximize the FM waveform by the tracking button.
4. If the observed FM waveform is not flat, adjust the height of the supply of take-up guide roller with the roller driver (PTU94002).

   Note: *To prevent the tape from damage, turn the guide rollers slowly.*

5. By operating the tracking button (both in + and – directions) in the manual tracking mode, vary the output level of the FM waveform from maximum to minimum and vice versa to confirm that the waveform varies nearly in a flat shape.
6. When the FM waveform breaks in the level varying process, subtly adjust the height of guide rollers at every breaking point so that the waveform varies as flat as possible.
   Repeat the above steps 5. and 6. several times to confirm that the waveform is flat as a whole.
7. Play the LP stair step signal of alignment tape and adjust the tracking control to maximize the FM waveform, confirm that FM waveform variation is always flat.
8. Record the signal and play it back in both of the SP and LP mode, and confirm that the FM waveform is flat in both modes.

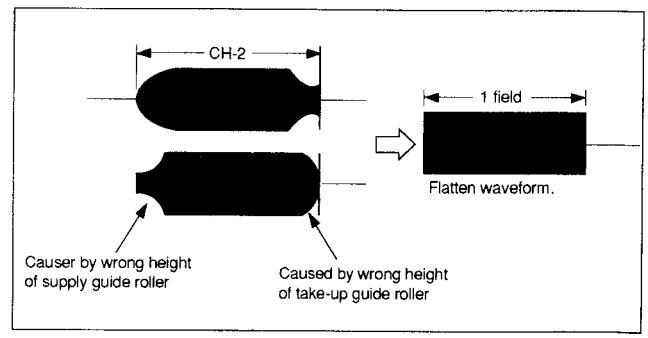

CH-2
1 field
Flatten waveform.
Causer by wrong height of supply guide roller
Caused by wrong height of take-up guide roller

Fig. 2-5-2 FM waveform-1

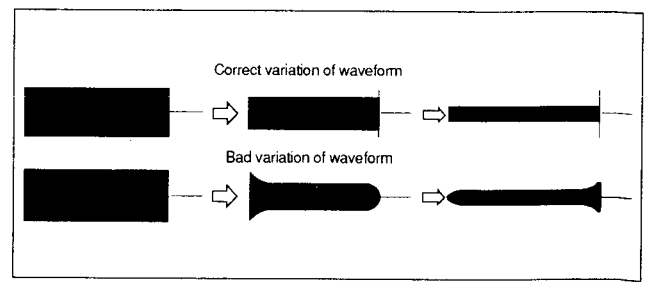


Fig. 2-5-3 FM waveform-2

9. Through the above steps, confirm that there occur no wrinkling and damage in the tape around the pinch roller and TU guide pole whenever the deck is in operation of Loading/Unloading, Search Rewind and at mode change from Search Rewind to play mode. If wrinkling or damage in the tape occurs around the TU guide pole, adjust the angle (slant) of the A/C head to the tape. So that the tape normally runs along the lower flange of the guide pole.

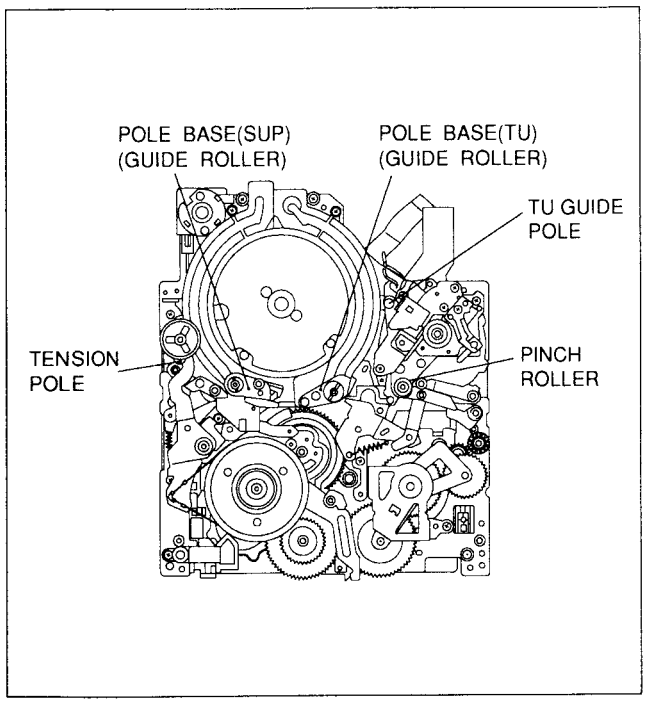


Fig. 2-5-4 Tape transport system

2.5.4 A/CTL head height & azimuth

1. Play back the SP 6 kHz segment of the alignment tape and observe waveform at AUDIO OUT.
2. Turn the screw Ⓐ, Ⓑ (tilt) and Ⓒ (azimuth) gradually (at an angle of 45° approx.) in the same direction to obtain the maximum output level.
3. As final fine adjustment, adjust the screw Ⓑ for minimum level fluctuation and the screw Ⓒ for maximum output level.

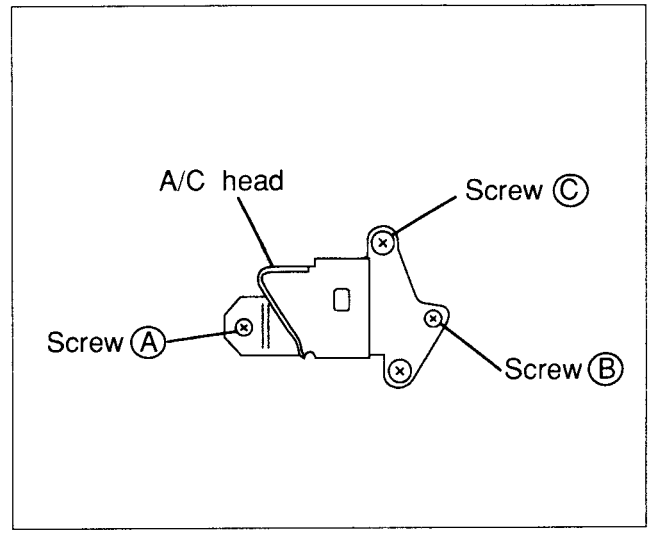


Fig. 2-5-5 A/C head

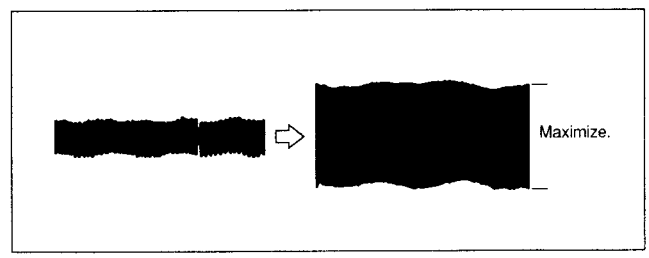


Fig. 2-5-6 Audio signal

2.5.5 Phase of control head (X value)

1. Play back the SP stairstep signal of the alignment tape and observe signal at pin 2 of CN20 (V.TP FM) with external trigger from pin 5 of CN20 (V.H.FF) on the MAIN board.
2. Operate the tracking button in the centre and manual tracking mode by pressing the tracking (+) and (–) buttons and confirm that the FM output level is maximum at the centre position as shown in Fig. 2-5-8.
3. If necessary, slightly loosen the setscrews Ⓓ and Ⓔ and insert the Tweezers into the notch and guide hole to move the A/C head fully in the direction of the capstan to the extent.
4. Gradually move the A/C head toward the drum to find the position where the FM output level maximum for the first time (a' – b' in Fig. 2-5-8).
5. Fine adjust the phase of the A/C head and tighten the screws Ⓓ and Ⓔ at the point a.
6. Play back the LP stairstep signal of the alignment tape (MHPE-LC) and confirm that the FM waveform is maximized at the centre detent position of the tracking button.
7. Confirm that the above steps 2. and 6. are satisfactory at the same time.
   If not, repeat the steps 3. through 6..

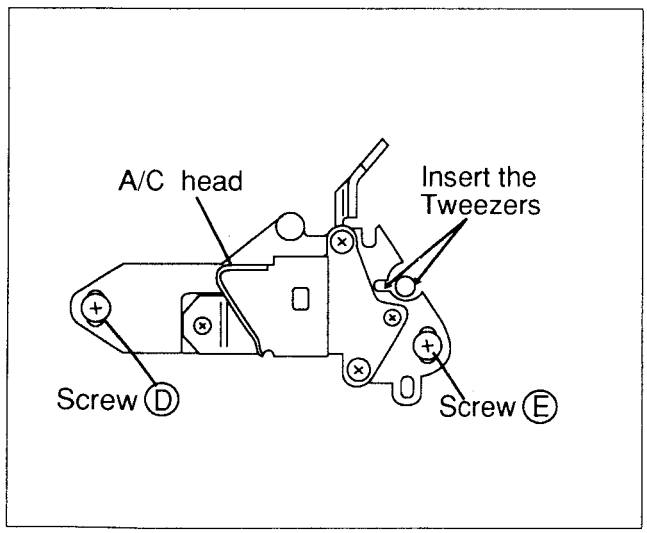


Fig. 2-5-7 Phase of control head

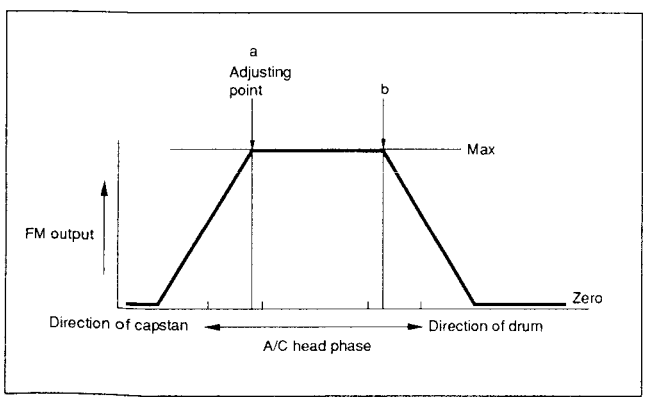


Fig. 2-5-8 Phase adjustment point of control head

2.6 REMARKS

2.6.1 Cleaning

1. For cleaning of the upper drum (particularly video heads), use fine-woven cotton cloth or Kimwipe with alcohol soaks through. Do not move the cloth but turn the upper drum counterclockwise.

   Note: *Make sure not to move the cloth in the vertical direction to the video head, since it may cause damage of the video heads.*

2. For cleaning of parts of the tape transport system except the upper drum, use fine-woven cotton cloth or cotton swab soaked alcohol.
3. After cleaning, confirm that the cleaned parts are completely dry before loading the deck with cassette tape.

2.6.2 Applying oil and grease

1. Periodical oiling and greasing are not required but should be done to new parts when replacing. If oil and grease on the other parts of the other party are old and dirty, wipe them clean and apply new oil or grease.
2. For parts and points to apply oil and grease, refer to the exploded view of the mechanism assembly (M3).
   Table 2-6-1 specifies oil and grease to be used.
3. When oiling, clean the objective parts with alcohol first and apply one or two drop(s) of oil. Too much oiling causes rotary parts to slip because of oil leakage.

Classification	Name	Part No.	Symbol in drawing
Grease	Grease	KYODO-SH-P	AA
Oil	Cosmo Hydro HV100	YTU94027	BB

Table 2-6-1 Specific oil and grease to be used

2.6.3 Checkup

After replacement of the supply reel disk and tension band, make sure to inspect beck tension according to the adjustment procedure of MECHANISM ADJUSTMENT section.

SECTION 3
ELECTRICAL ADJUSTMENT

3.1 ELECTRICAL ADJSUTMENT

3.1.1 PREPARATION

1. Precaution

This model does not contain adjustment controls (VR) . General deck system and camra system adjustment are not required. However, if MAIN board need replacement, please use original E^2PROM on to new board. Then adjustment are not required. And if parts such as the following need replacement, special computerized adjustment are required (Refer to sec. 3.1.1-5) . Please contact to JVC service for detaile information.

- OP block
- E^2PROM (IC903 of MAIN board)

In the event of malfunction with electrical circuits, trouble-shooting with the aid of proper test instruments most be done first, and then commence necessary repair, replacement and adjustment, etc.

1. In case of wiring to chip test points for measurement, use IC clips, etc. to avoid any stress.
2. Since connectors are fragile, carefully handle them in disconnecting and connecting.
3. Shortcircuit between opration unit and DECK chassis.

2. Required test equipment

1. Colour TV monitor.
2. AC power adapter (AA-V10 and AA-V6 or equivalent) .
3. Oscilloscope (Dual-trace type, for more than 20 MHz) .
4. Digital voltmeter
5. Personal computer

3. Required adjustment tools

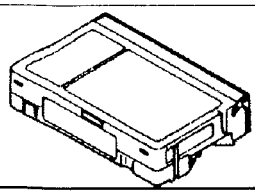
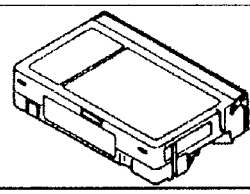
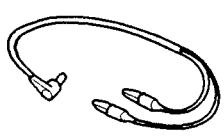
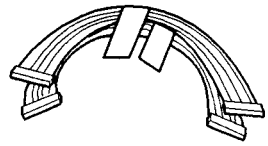
Alignment tape for SP interchangeability (MHPE-C)	Alignment tape for N. SP PB Y/C level (MHVE-2C)
	
Power cord YTU94060A	Patch cord set YTU93076A
	

Table 3-1-1 Required adjustment tools

4. Setup for E. VF section adjustment

1. Referring to 'sec. 1. DISASSEMBLE' and connect the COLOUR VF connector CN101 of the PBL board to CN14 of the MAIN board of deck section (for GR-AX350E) .
2. Referring to 'sec. 1. DISASSEMBLE' and connect the E. VF connector CN1 of the E. VF board to CN14 of the MAIN board of deck section (for GR-AX400E/AX200E) .

5. Required adjustment tools for Service support system

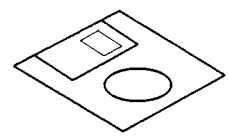
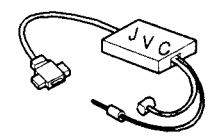
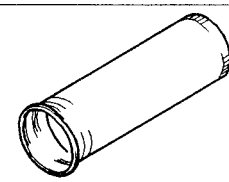
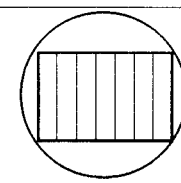
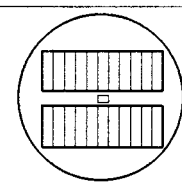
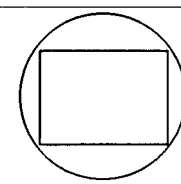
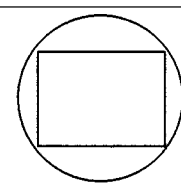
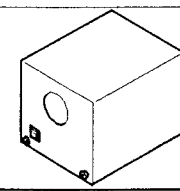
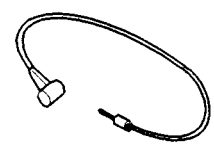
Service Support System software YTU94057-12	Interface cable YTU93063
	
Infinity adjustment lens YTU92001B	Colour bar chart YTU92001-051
	
Gray scale chart YTU92001-052	White balance chart YTU92001-053
	
Skintone chart YTU92001-054	Light box YTU93072
	
Adapter cable YTU94066	
	

Table 3-1-2 Required adjustment tools for Service support system

6. Connections for Service support system

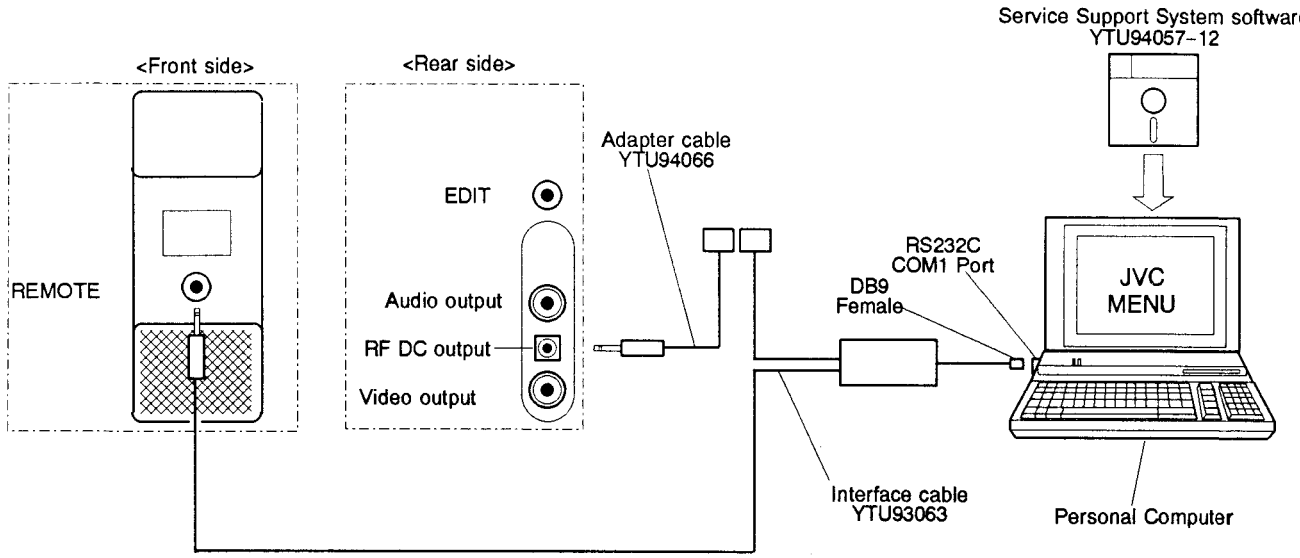


Fig. 3-1-1 Connections for Service support system

■ CIRCUIT PROTECTOR AND BATTERY TERMINAL LOCATION FOR REAR BOARD

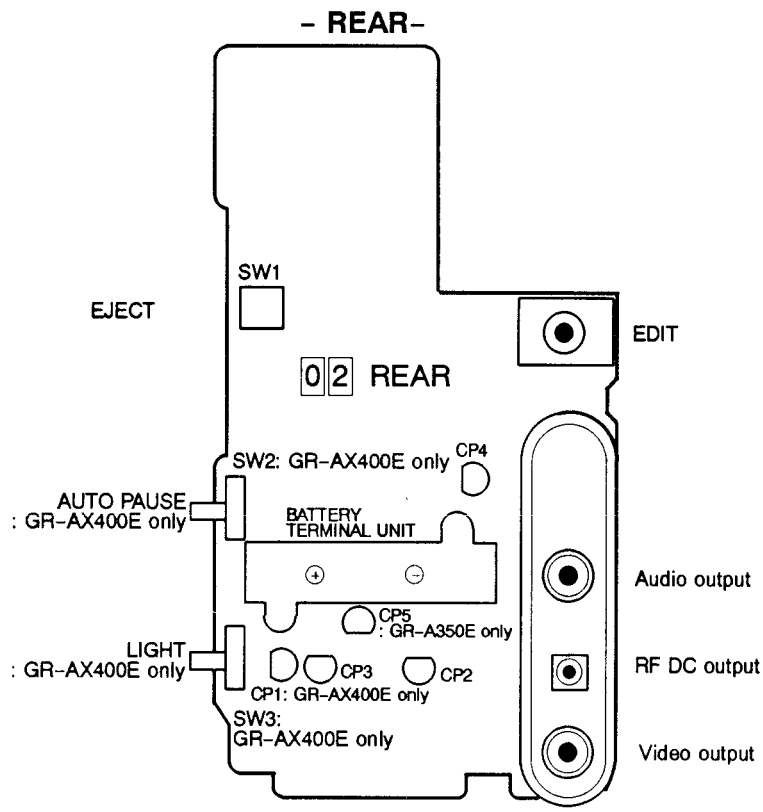


Fig. 3-1-2 Circuit protector and battery terminal location for REAR board assembly

■ ADJUSTMENT ELEMENT LOCATION FOR CAMERA SECTION

– CCD–

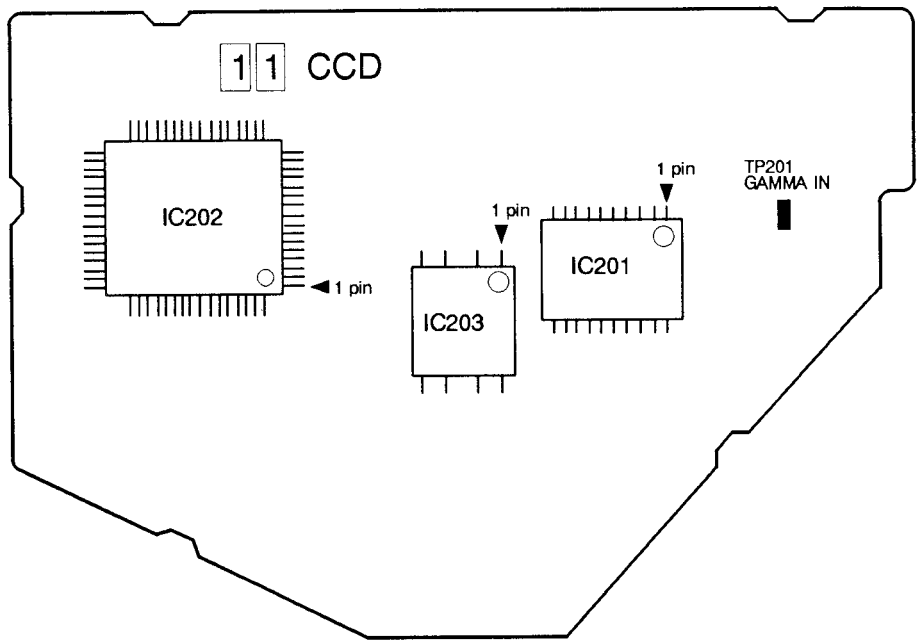


Fig. 3-1-3 Adjustment element location for CCD board assembly

■ ADJUSTMENT ELEMENT LOCATION FOR COLOUR VIEWFINDER SECTION

— PBL —

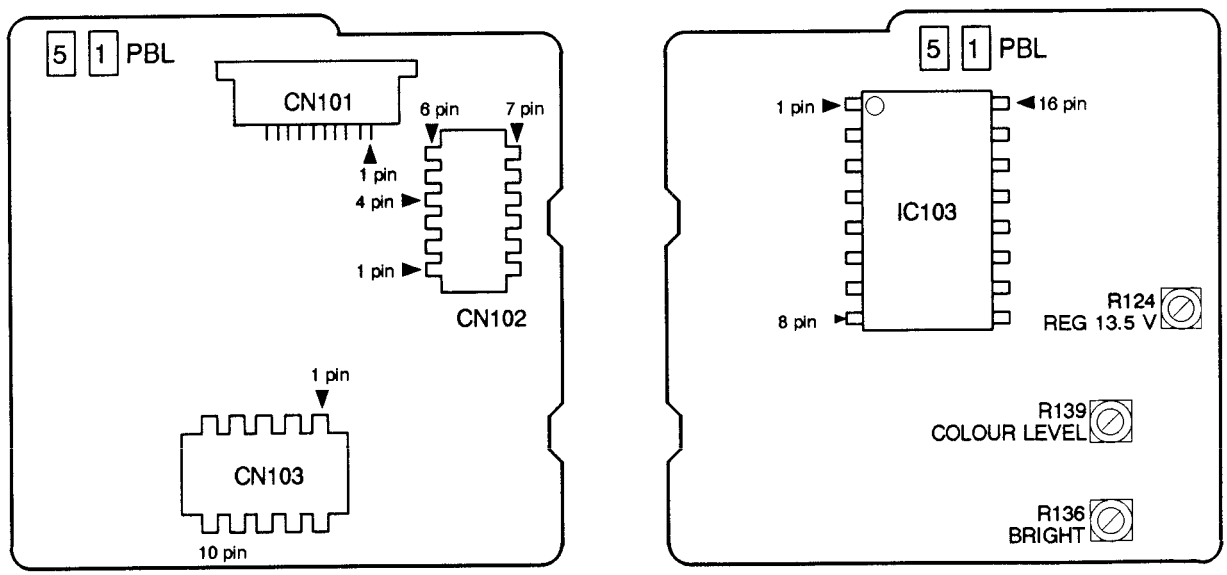


Fig. 3-2-1 Adjustment element location for PBL board assembly

— CLD —

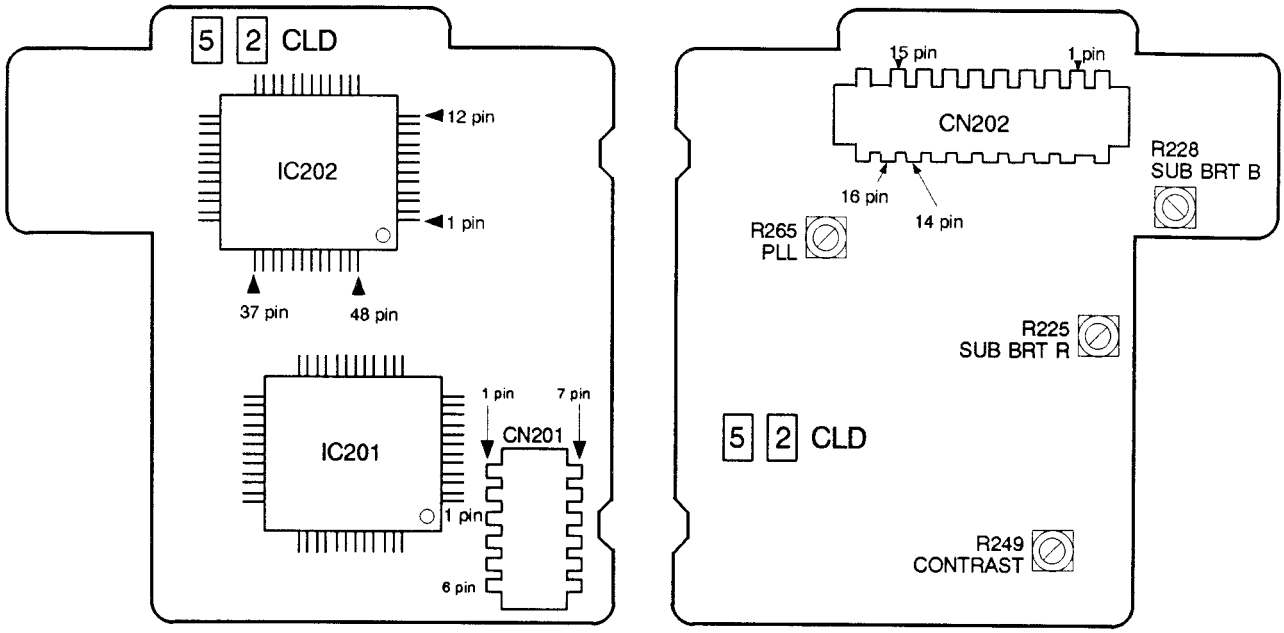


Fig. 3-2-2 Adjustment element location for CLD board assembly

3.2 COLOUR VIEWFINDER SECTION ADJUSTMENT (For GR-AX350E)

Notes: *Unless otherwise specified, all measurement points and adjustment parts are located on CLD board.*

3.2.1 REG 13.5 V

Subject	•–
Mode	•EE
Equipment	•Digital voltmeter
Measurement point	•CN102 pin 4 (PBL board)
Adjustment part	•R124 (REG 13.5 V) (PBL board)
Specification	•13.5 ± 0.1 V DC

1) Connect a digital voltmeter to pin 4 of the CN102.
2) Adjust R124 for 13.5 V DC.

3.2.2 PLL

Subject	•–
Mode	•EE
Equipment	•Oscilloscope
Measurement point	•IC202 pin 37
Adjustment part	•R265 (PLL)
Specification	•"A" = 3.2 ± 0.1 V DC

1) Observe waveform at pin 37 of the IC202.
2) Adjust R265 so that DC level of "A" (between the waveform centre and GND, see Fig. 3-2-3) of a waveform becomes 3.2 V DC.

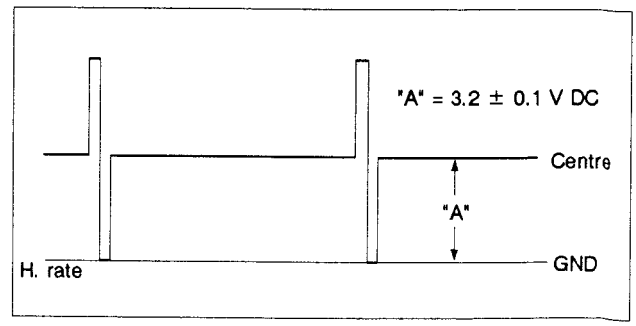


Fig. 3-2-3 PLL

3.2.3 Brightness

Subject	•Alignment tape [MHPE-C] •Stairstep
Mode	•PB
Equipment	•Oscilloscope
Measurement point	•CN202 pin 14 (G OUT)
Adjustment part	•R136 (BRIGHT) (PBL board)
Specification	•"A" = 8.0 ± 0.1 Vp-p

1) Observe waveform at pin 14 of CN202.
2) Adjust R136 so that level of "A" (see Fig. 3-2-4) of a waveform becomes 8.0 Vp-p.

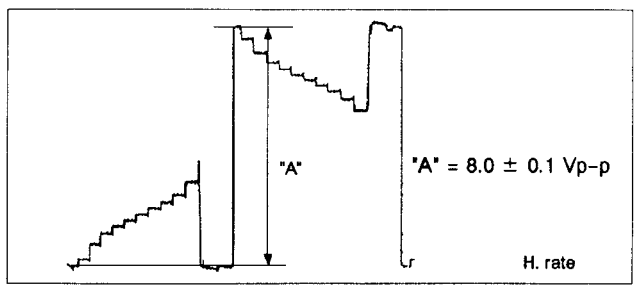


Fig. 3-2-4 Brightness

3.2.4 Contrast

Subject	•Alignment tape [MHPE-C] •Stairstep
Mode	•PB
Equipment	•Oscilloscope
Measurement point	•CN202 pin 14 (G OUT)
Adjustment part	•R249 (CONTRAST)
Specification	•"A" = 2.3 ± 0.1 Vp-p

1) Observe waveform at pin 14 of CN202.
2) Adjust R249 so that level of "A" (see Fig. 3-2-5) of a waveform becomes 2.3 Vp-p.

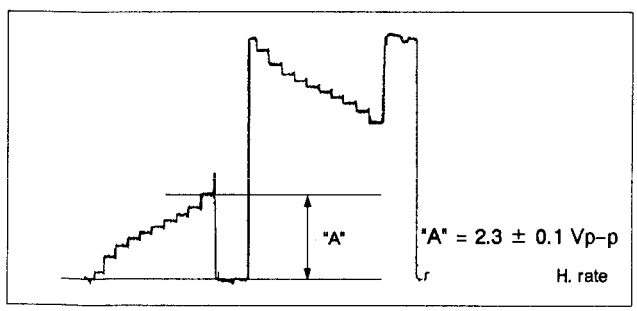


Fig. 3-2-5 Contrast

3.2.5 White balance-1

Subject	•Alignment tape [MHPE-C] •Stairstep
Mode	•PB
Equipment	•Oscilloscope
Measurement point	•CN202 pin 14 (G OUT) •CN202 pin 13 (R OUT)
Adjustment part	•R225 (SUB BRT R)
Specification	•Equal level "A" ± 0.1 Vp-p

1) Connect the oscilloscope to pin 14 of CN202.
2) Observe waveform and make a note of the level as "A" (see Fig. 3-2-6).
3) Connect the oscilloscope to pin 13 of CN202.
4) Adjust R225 so that pin 13 of CN202 level of "A" is equally to pin 14 of CN202 of the noted "A" level.

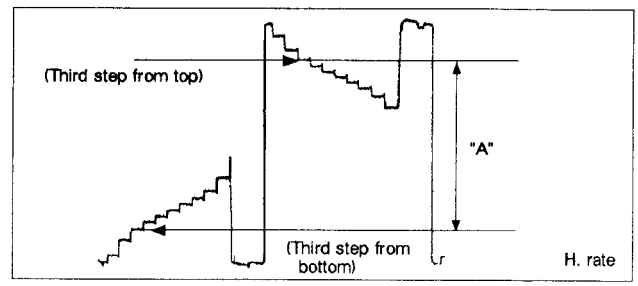


Fig. 3-2-6 White balance-1

3.2.6 White balance-2

Subject	•Alignment tape [MHPE-C] •Stairstep
Mode	•PB
Equipment	•Oscilloscope
Measurement point	•CN202 pin 14 (G OUT) •CN202 pin 12 (B OUT)
Adjustment part	•R228 (SUB BRT B)
Specification	•"B" = "A" + 0.2 ± 0.1 Vp-p

1) Connect the oscilloscope to pin 14 of CN202.
2) Observe waveform and make a note of the level as "A" (see Fig. 3-2-7).
3) Connect the oscilloscope to pin 12 of CN202.
4) Adjust R228 so that pin 12 of CN202 level of "B" is "A" + 0.2 Vp-p (pin 14 of CN202 of the noted "A" level).

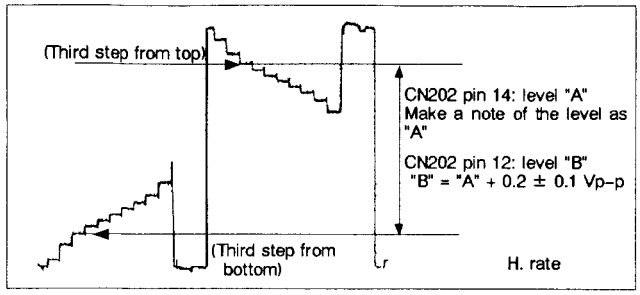

(Third step from top)
CN202 pin 14: level "A"
Make a note of the level as "A"
CN202 pin 12: level "B"
"B" = "A" + 0.2 ± 0.1 Vp-p
(Third step from bottom)
H. rate

Fig. 3-2-7 White balance-2

3.2.7 Colour level

Subject	•Alignment tape [MHVE-2C] •Colour bar
Mode	•PB
Equipment	•Oscilloscope
Measurement point	•CN202 pin 14 (G OUT)
Adjustment part	•R139 (COLOUR LEVEL) [PBL board]
Specification	•"A" = 0.2 ± 0.1 Vp-p

1) Observe waveform at pin 14 of CN202.
2) Adjust R139 so that level of "A" (between the waveform pedestal and magenta level of negative waveform, see Fig. 3-2-8) of a waveform becomes 0.2 Vp-p.

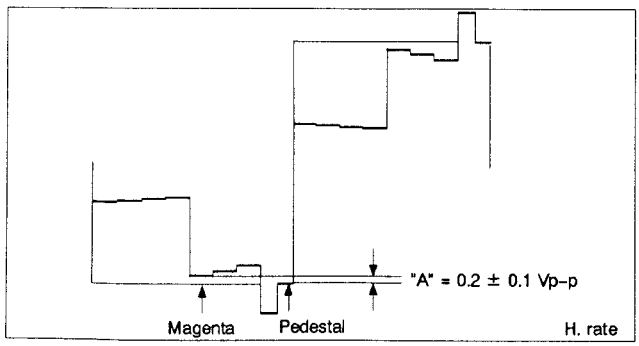


Fig. 3-2-8 Colour level

3.3 ELECTRONIC VIEWFINDER (E. VF) ADJUSTMENT (For GR-AX400E/AX200E)

Note: *Unless otherwise specified, all measurement points and adjustment parts are located on E. VF board.*

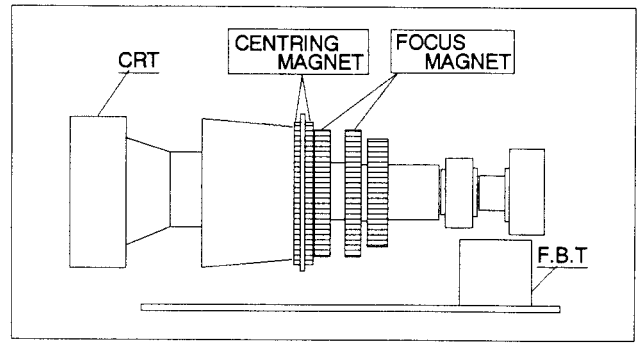


Fig. 3-3-1 E. VF

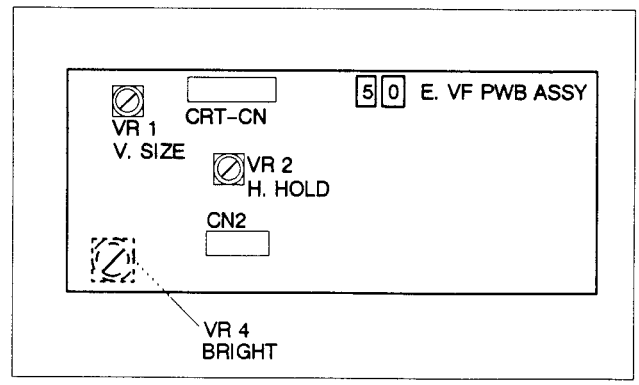


Fig. 3-3-2 E. VF board

3.3.1 Horizontal sync.

Subject	•Alignment tape [MHPE-C] •Stairstep
Mode	•PB
Equipment	•E. VF
Measurement point	•E. VF screen
Adjustment part	•VR2 (H. HOLD)
Specification	•The midpoint of the two markings

1) Observing the viewfinder screen, turn VR2 fully clockwise to make the picture unstable.
2) Slowly return VR2 counterclockwise to find a point where the picture becomes stable, and mark this position.
3) Turn VR2 fully counterclockwise to make the picture unstable in the same manner as 1) above.
4) Slowly return VR2 clockwise until the picture becomes stable, and mark this position of VR1.
5) Finally set VR2 to the midpoint between the two markings of 2) and 4).

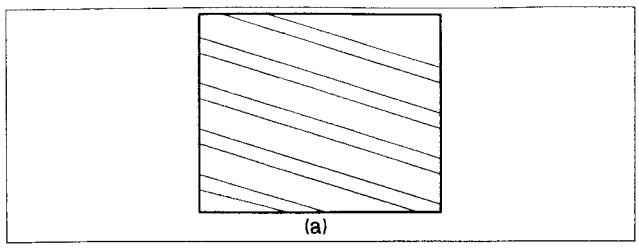


Fig. 3-3-3 Horizontal sync.1

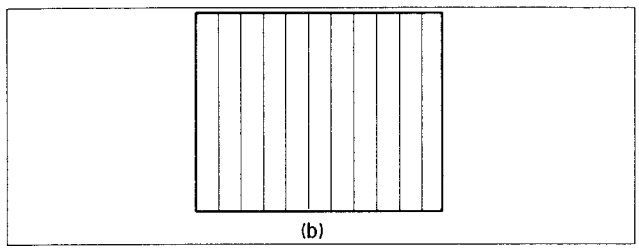


Fig. 3-3-4 Horizontal sync.2

3.3.2 Vertical scanning

Subject	•Alignment tape [MHPE-C] •Stairstep
Mode	•PB
Equipment	•E. VF
Measurement point	•E.VF screen
Adjustment part	•VR1 (V. SIZE)
Specification	•Normal picture amplitude

1) Observing the viewfinder screen, adjust VR1 for normal picture amplitude.

3.3.3 Centring

Subject	•Alignment tape [MHPE-C] •Stairstep
Mode	•PB
Equipment	•E. VF
Measurement point	•E.VF screen
Adjustment part	•Centring magnet (CRT assy)
Specification	•The centre of the E. VF screen

1) While observing the viewfinder screen, adjust the centring magnet to locate the stairstep in the centre of the viewfinder screen.

3.3.4 Focus

Subject	•Alignment tape [MHPE-C] •Stairstep
Mode	•PB
Equipment	•E. VF
Measurement point	•E. VF screen
Adjustment part	•Focus magnet (CRT assy)
Specification	•The centre area is clear and defined

1) While observing the viewfinder screen, adjust the focus magnet for the deflecting yoke so that the image in the central area of the stairstep screen is clear and defined.

3.3.5 Brightness

Subject	• -
Mode	•EE •Lens closed
Equipment	•E. VF
Measurement point	•E. VF screen
Adjustment part	•VR4 (BRIGHT)
Specification	• The CRT raster is just barely visible

1) Close the lens with the cap and adjust VR4 so that the raster of the CRT is just visible in the E. VF.

• **MEMO**

SECTION 4
CHARTS AND DIAGRAMS

SCHEMATIC DIAGRAM NOTES

Safety precautions

The Components identified by the symbol ⚠ are critical for safety. For continued safety, replace safety critical components only with manufactures recommended parts.

1. Schematic diagram values

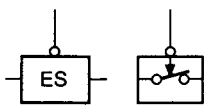
Unless otherwise specified.

1) All resistance values are in ohms. 1/6 W, 1/8 W (refer to parts list).
   Chip resistors are 1/16 W.
   K: KΩ (1000Ω), M: MΩ (1000KΩ)
2) All capacitance values are in μF, (P: PF).
3) All inductance values in μH, (m: mH).
4) All diodes are 1SS133 or MA165, (refer to parts list).

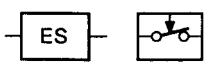
2. Indications

AUX : Active only at high.

$\overline{\text{AUX}}$: Active only at low.



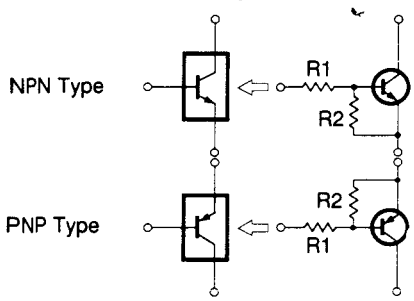
Active only at low for electronic switch.



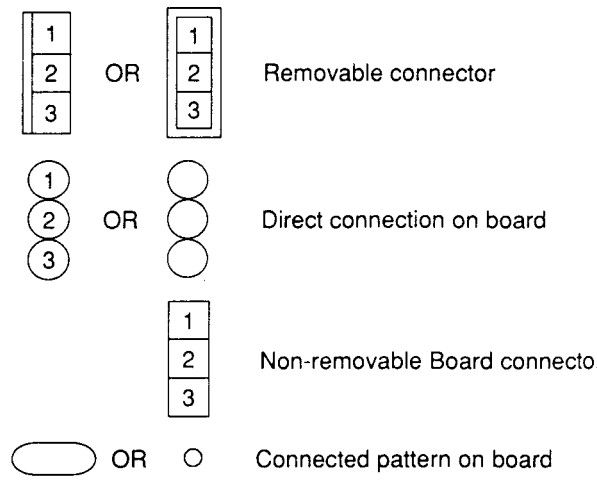
Active only at high for electronic switch.

Digital transistor :

The digital transistor includes built in resistors.
It features small size and high reliability.

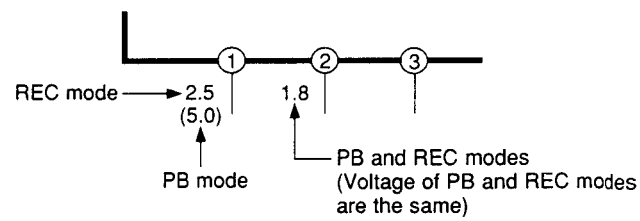


3. Interpreting Connector indications



4. Voltage measurement

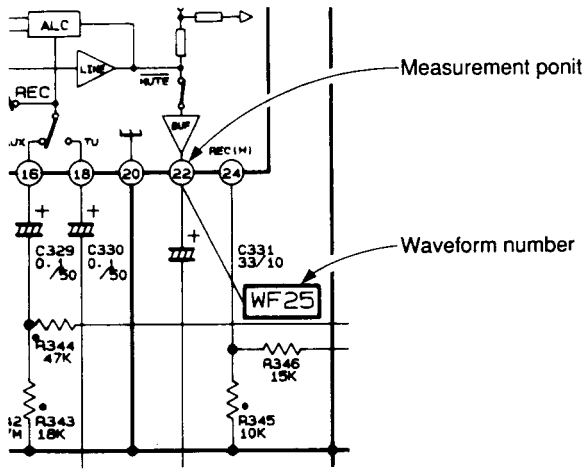
1) Video circuits
   REC: Colour bar signal in SP mode, normal VHS mode.
   PB : Alignment tape, colour bar SP mode, normal VHS mode.
   — : Unmeasurable or unnecessary to measure.
2) Audio circuits
   REC: 1KHz, –8 dBs sine wave signal in SP mode, Normal VHS mode.
   PB : REC then playback it.
3) Movie Camera circuits
   Measured using a correctly illuminated grey scale or colour bar test charts in the E-E mode.
4) Indication on schematic diagram
   Voltage Indications for REC and PB modes on the schematic diagram are as shown below.



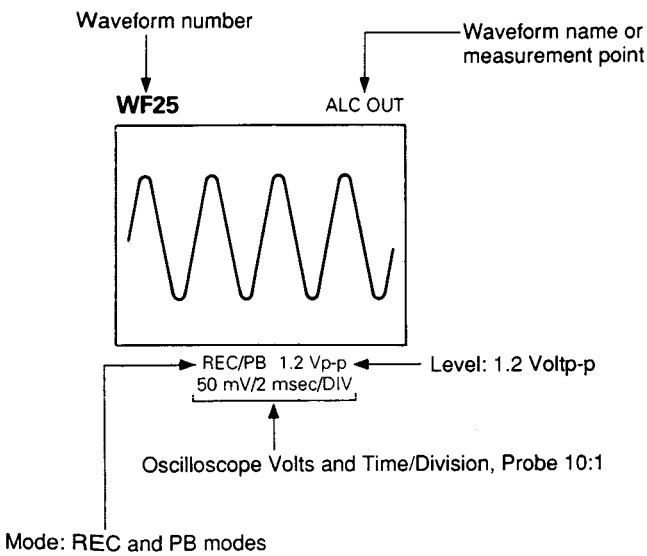
Note: If do not indicate for voltage measurement on the schematic diagram, refer to the voltage charts.

5. Waveform measurement

1) Video circuits
   REC: Colour bar signal in SP mode, normal VHS mode.
   PB : Alignment tape, colour bar SP mode, normal VHS mode.
2) Audio circuits
   REC: 1KHz, –8 dBs sine wave signal in SP mode, normal VHS mode.
   PB : REC then playback it.
3) Movie Camera circuits
   Measured using a correctly illuminated grey scale or colour bar test charts in the E-E mode.
4) Indication on schematic diagram
   Waveform indications on the schematic diagram are as shown below.



5) Waveform indications



6. Signal path Symbols

The arrows indicate the signal path as follows.

- Playback signal path
- Playback and recording signal path
- Recording signal path (including E-E signal path)
- Y signal path
- Colour (Chroma) signal path
- R or R-Y signal path
- B or B-Y signal path
- Capstan servo path
- Drum servo path
- Reel servo path

CIRCUIT BOARD NOTES

1. Colour indications

1) Foil side :
   Foil side patterns are indicated at GREY shading.
2) Component side :
   Component side patterns are indicated at RED shading.

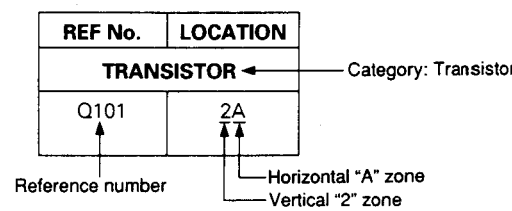
2. Foil and Component sides

1) Foil side (B side) :
   Parts on the foil side seen from foil face (pattern face) are indicated.
2) Component side (A side) :
   Parts on the component side seen from component face (parts face) are indicated.

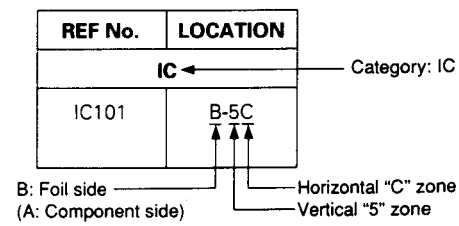
3. Parts location guides

Parts location are indicated by guide scale on the circuit board.

1) Signal pattern :



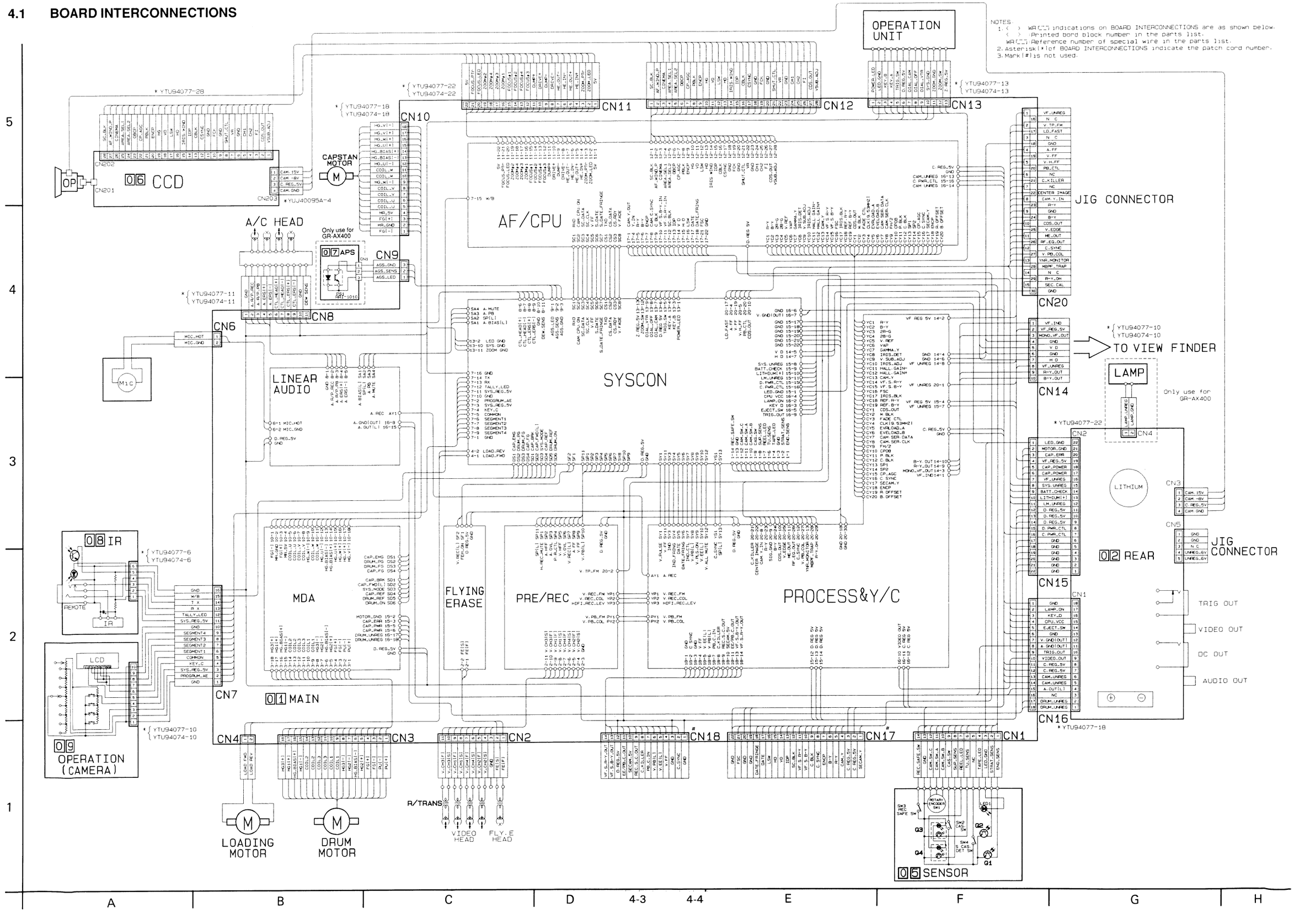
2) Double pattern :



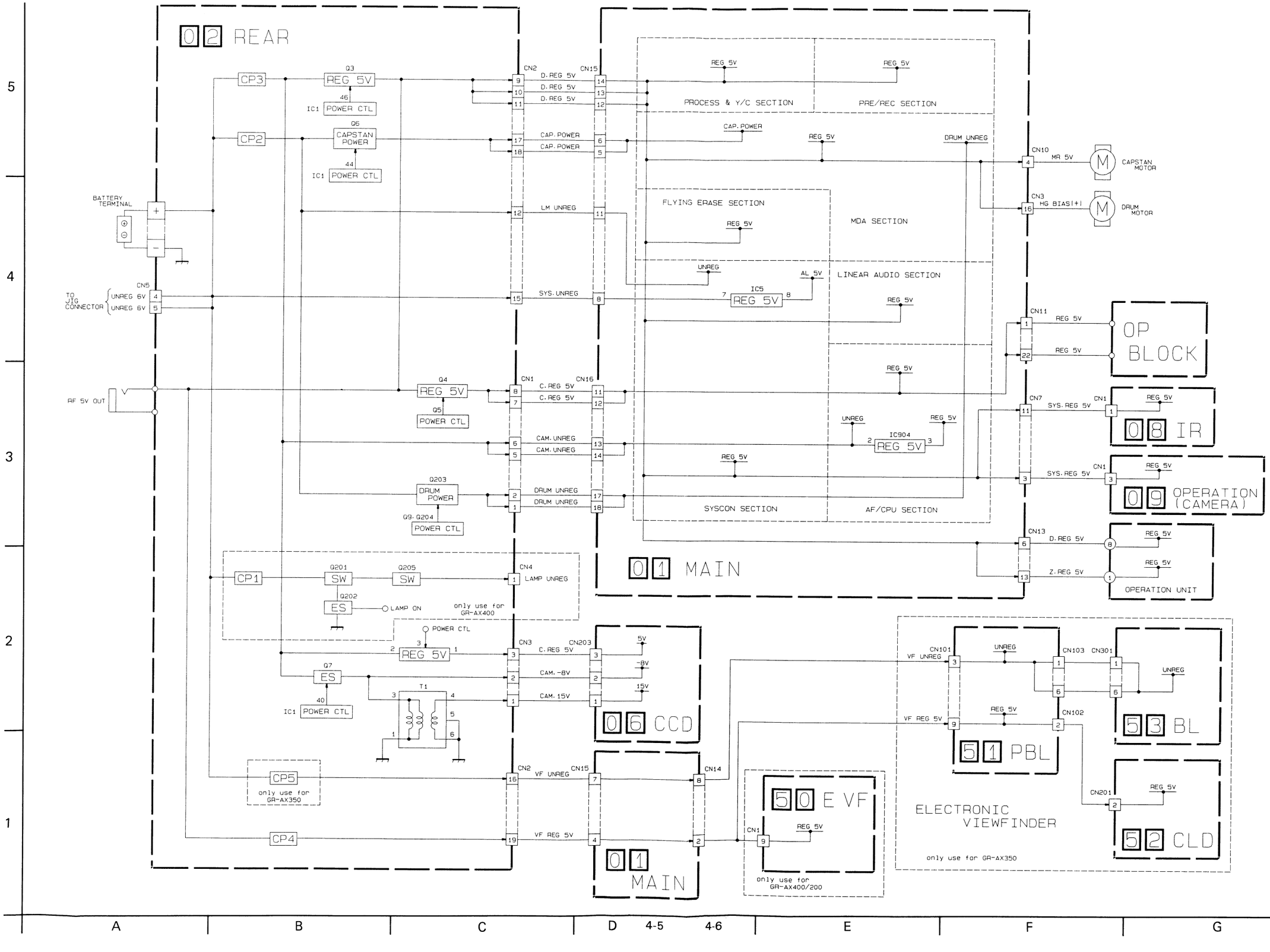
Notes:

1) **For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).**
2) **For repairing SMC (Surface Mounted Components), please refer to the VIDEO SERVICE GUIDE No. VTS81001.**

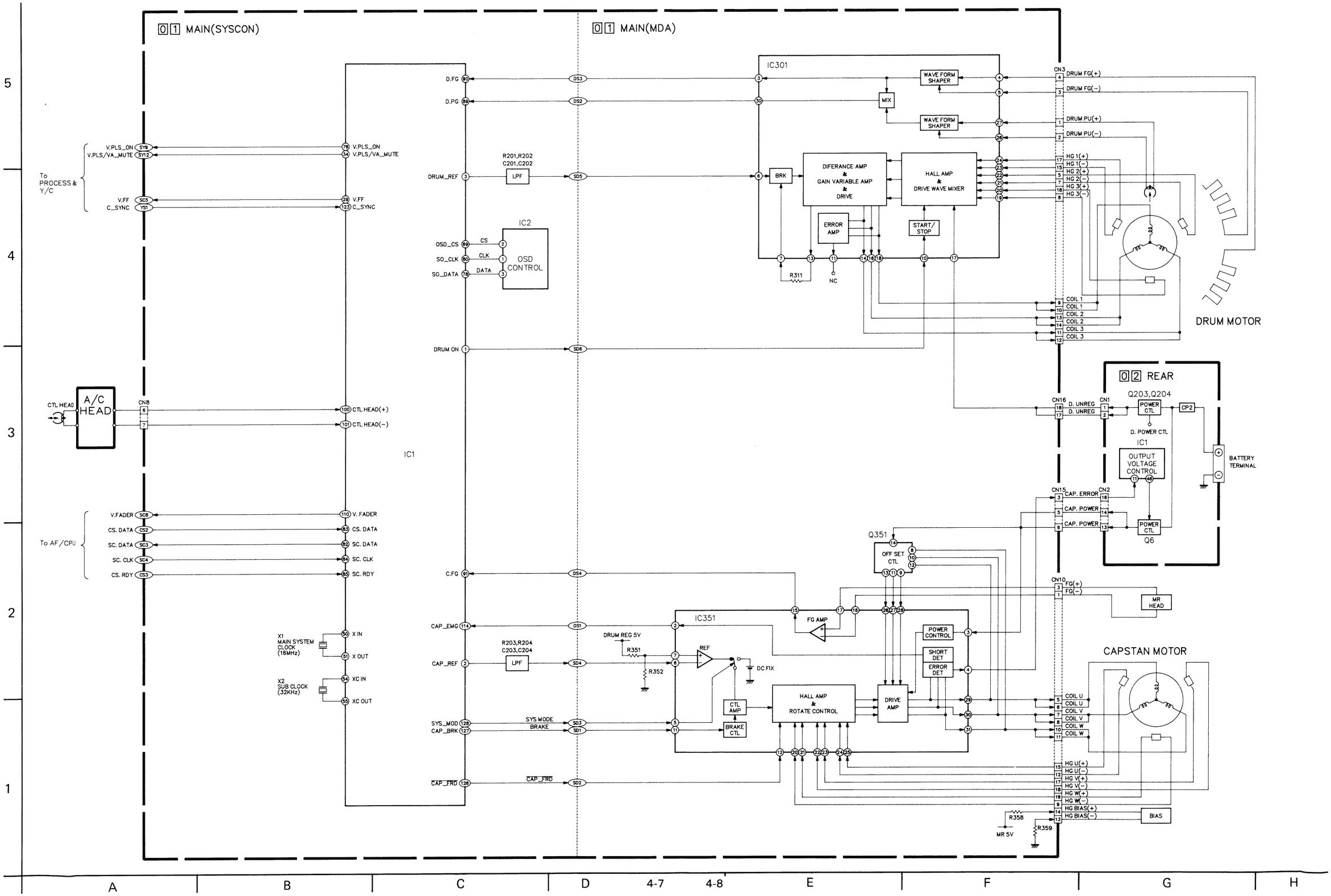
4.1 BOARD INTERCONNECTIONS



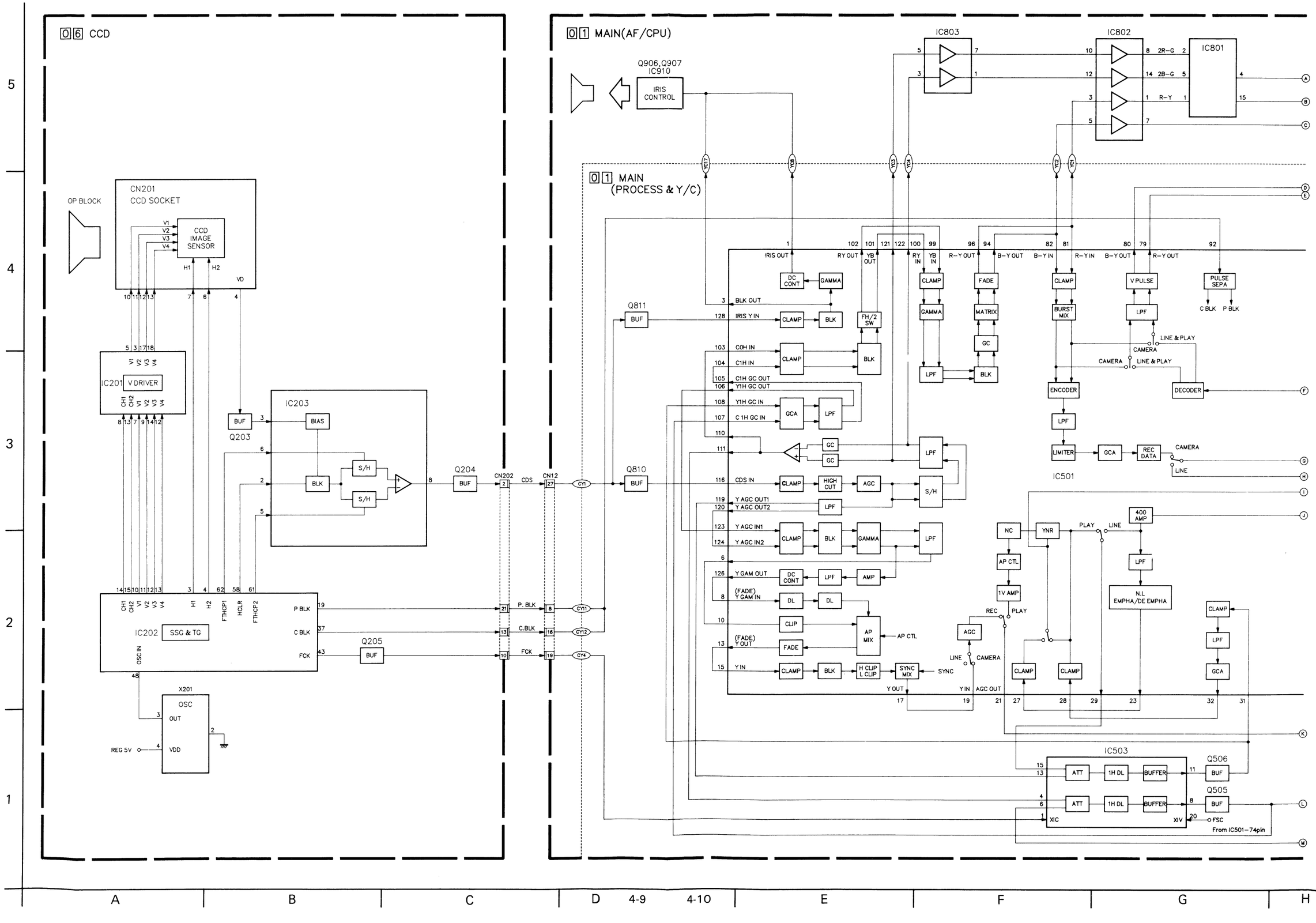
4.2 POWER SYSTEM BLOCK DIAGRAM

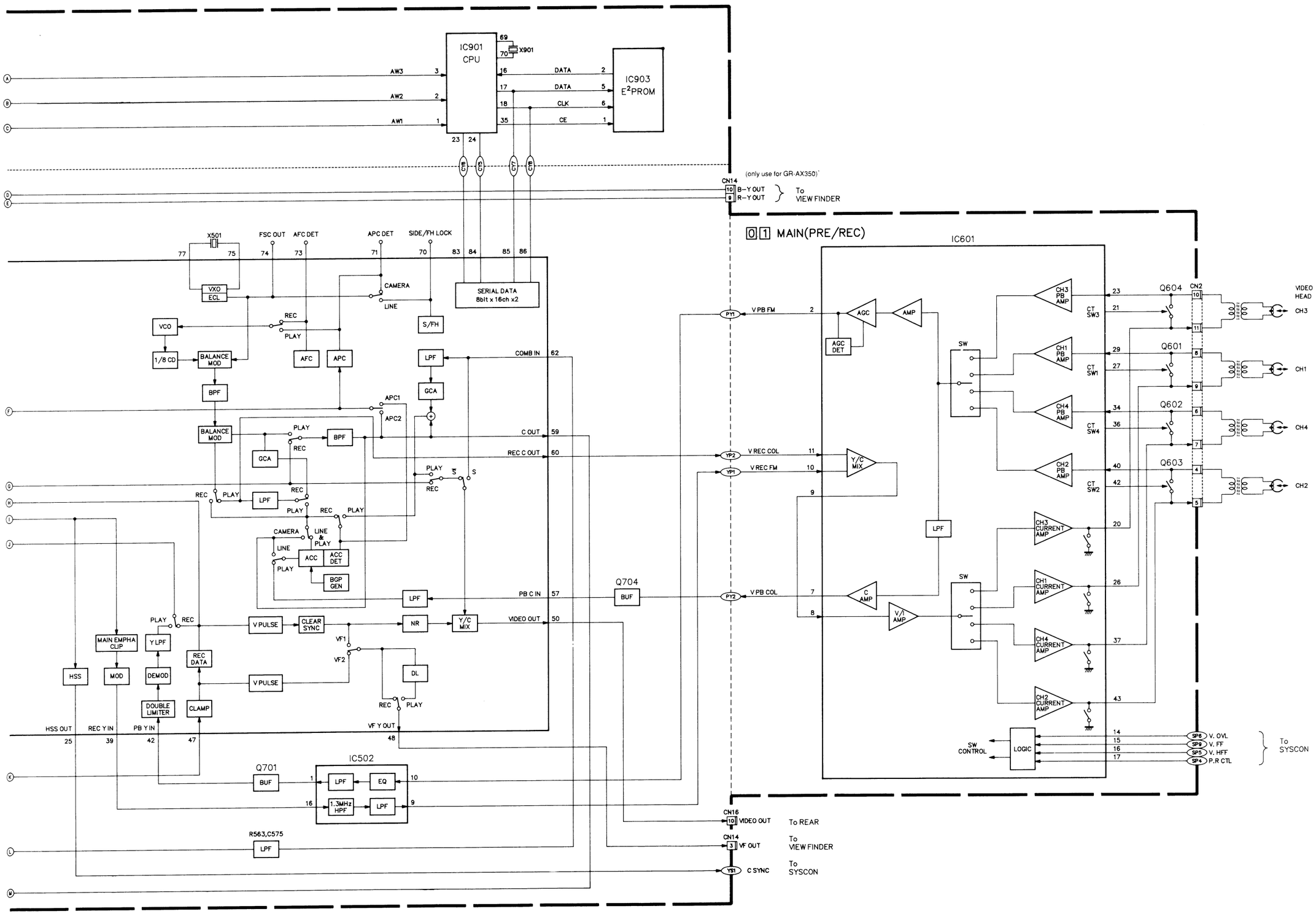


4.3 SYSCON/MDA BLOCK DIAGRAM



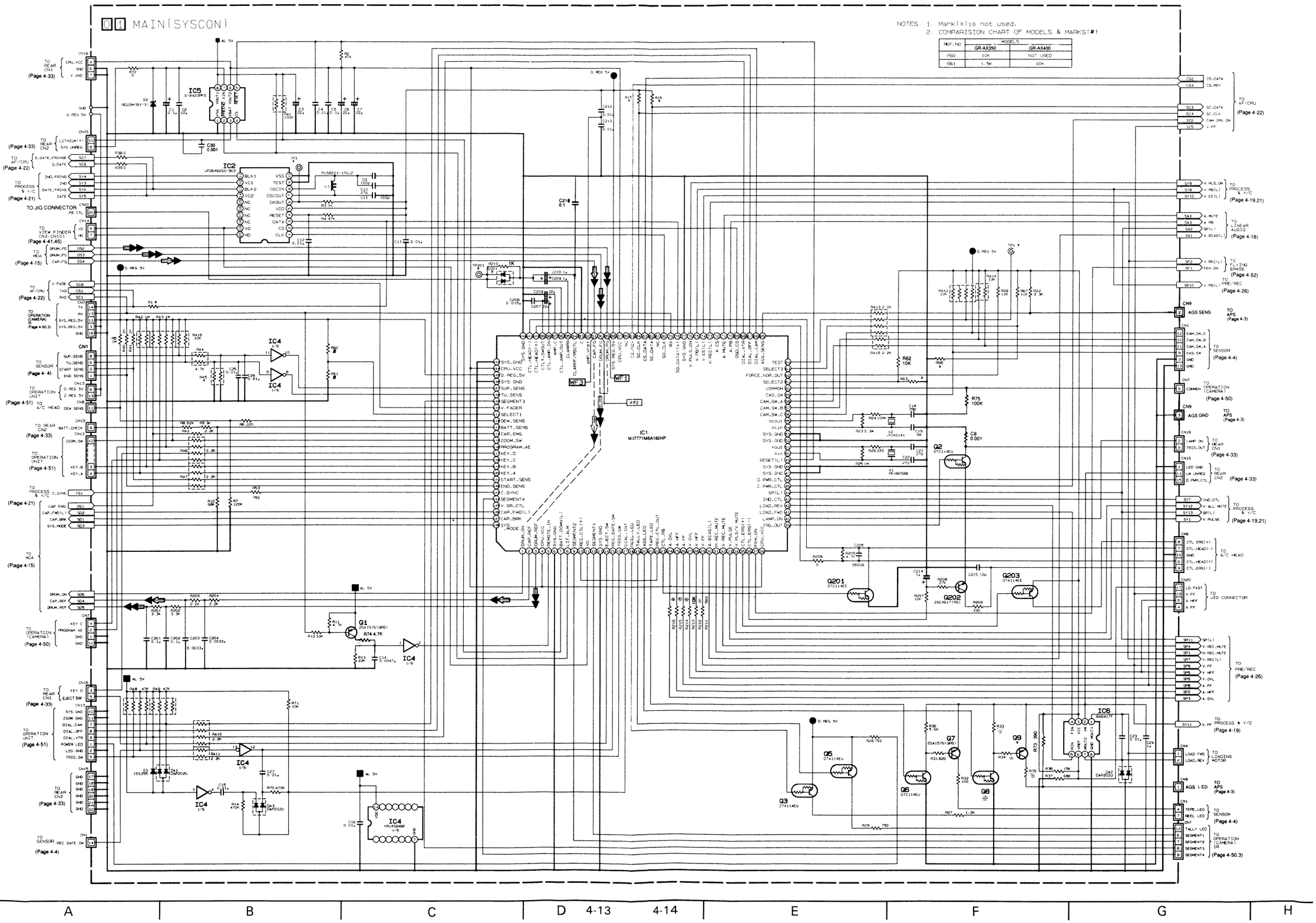
4.4 Y/C AND ROCESS BOCK DIAGRAM



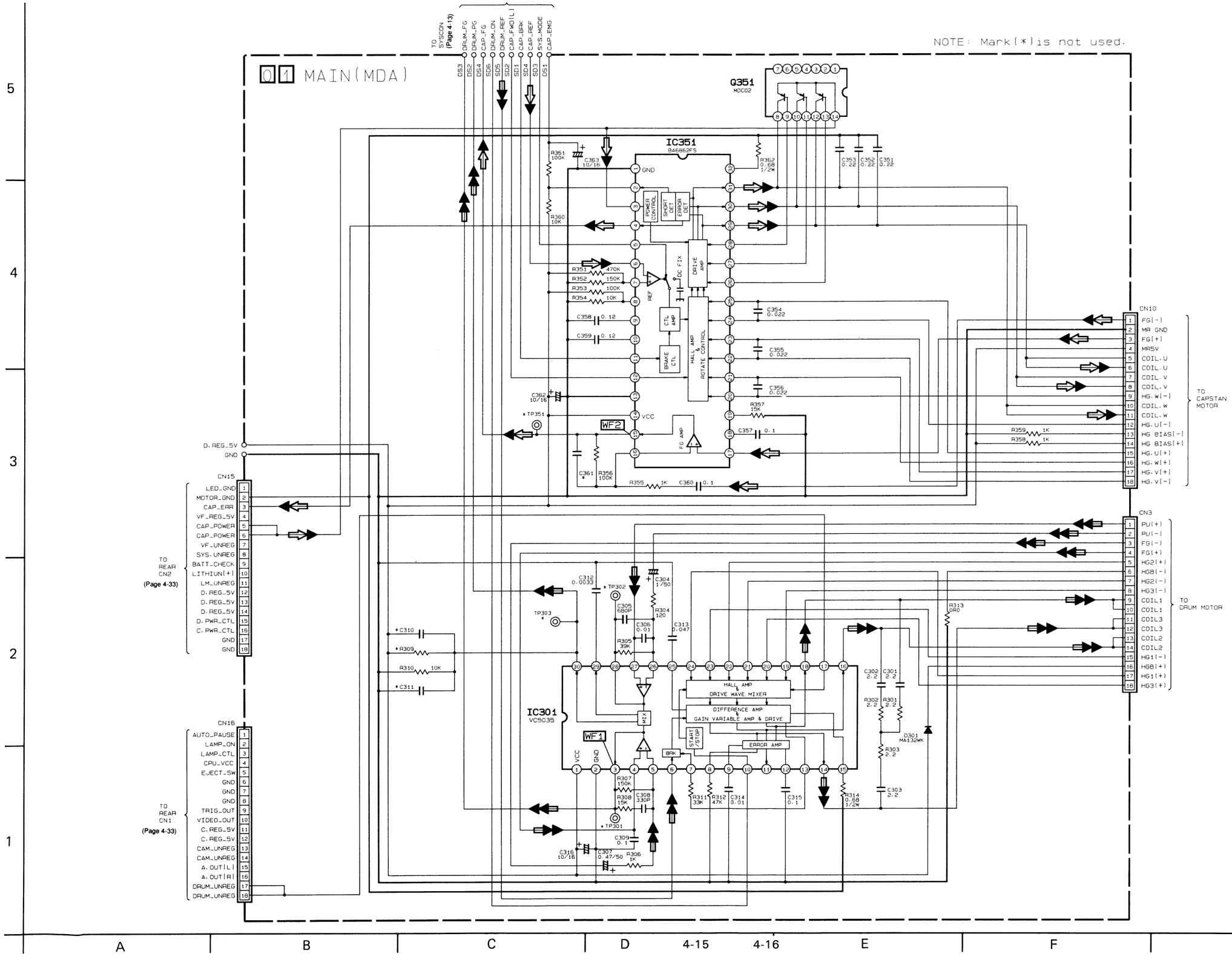


I J K L 4-11 4-12 M N O P

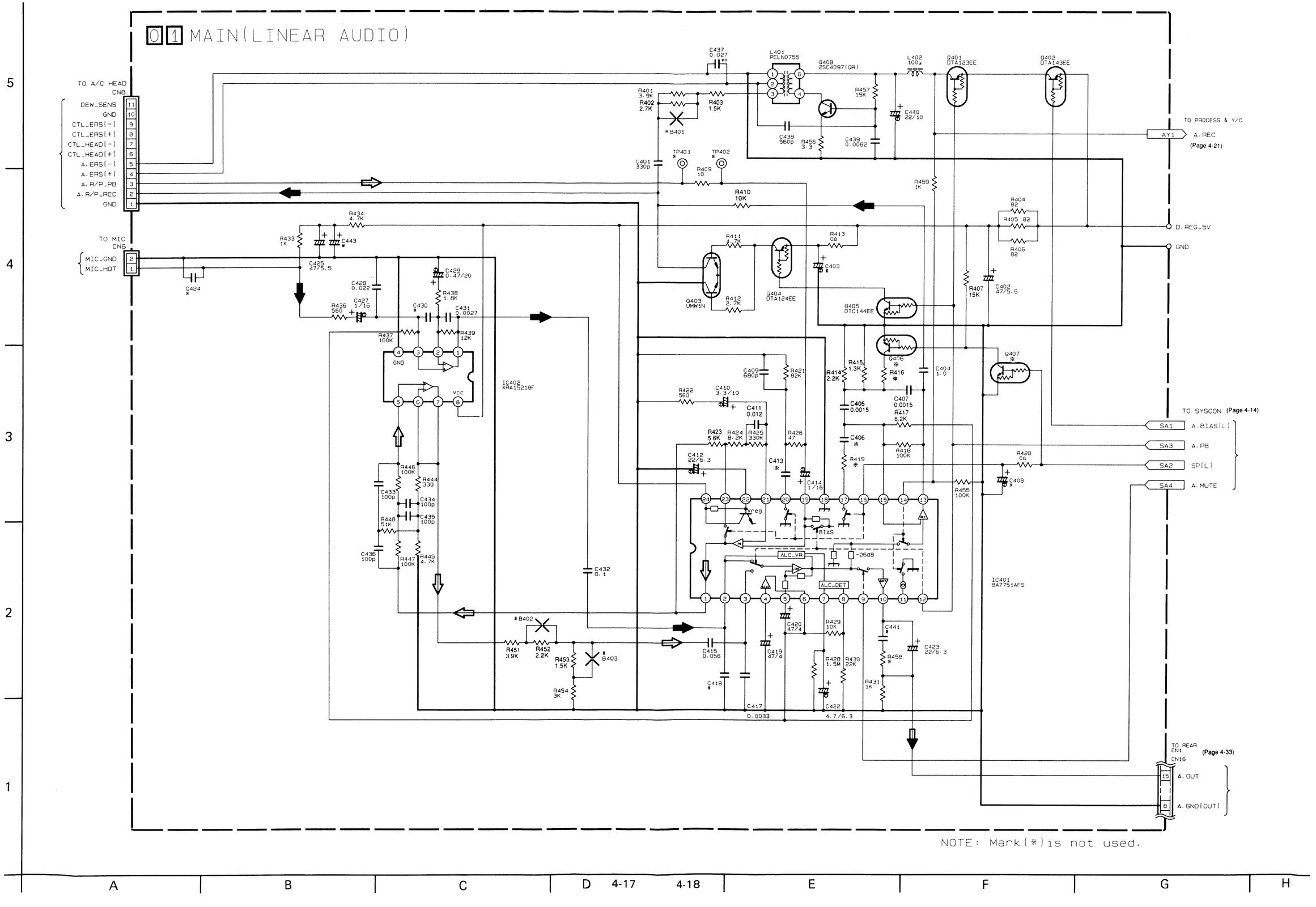
4.5 SYSCON SCHEMATIC DIAGRAM



4.6 MDA SCHEMATIC DIAGRAM



4.7 LINEAR AUDIO SCHEMATIC DIAGRAM



4.8 PROCESS AND Y/C SCHEMATIC DIAGRAM

NOTES: 1. Mark (*) is not used.
2. COMPARISON CHART OF MODELS & MARKS (#)

REF. NO	MODELS	
	GR-AX350EG	GR-AX400EG /200EG
D504	DAN222	NOT USED
R533	0	NOT USED
R534	0	NOT USED
R541	10K	NOT USED
R527	820	1K
R530	820	1K

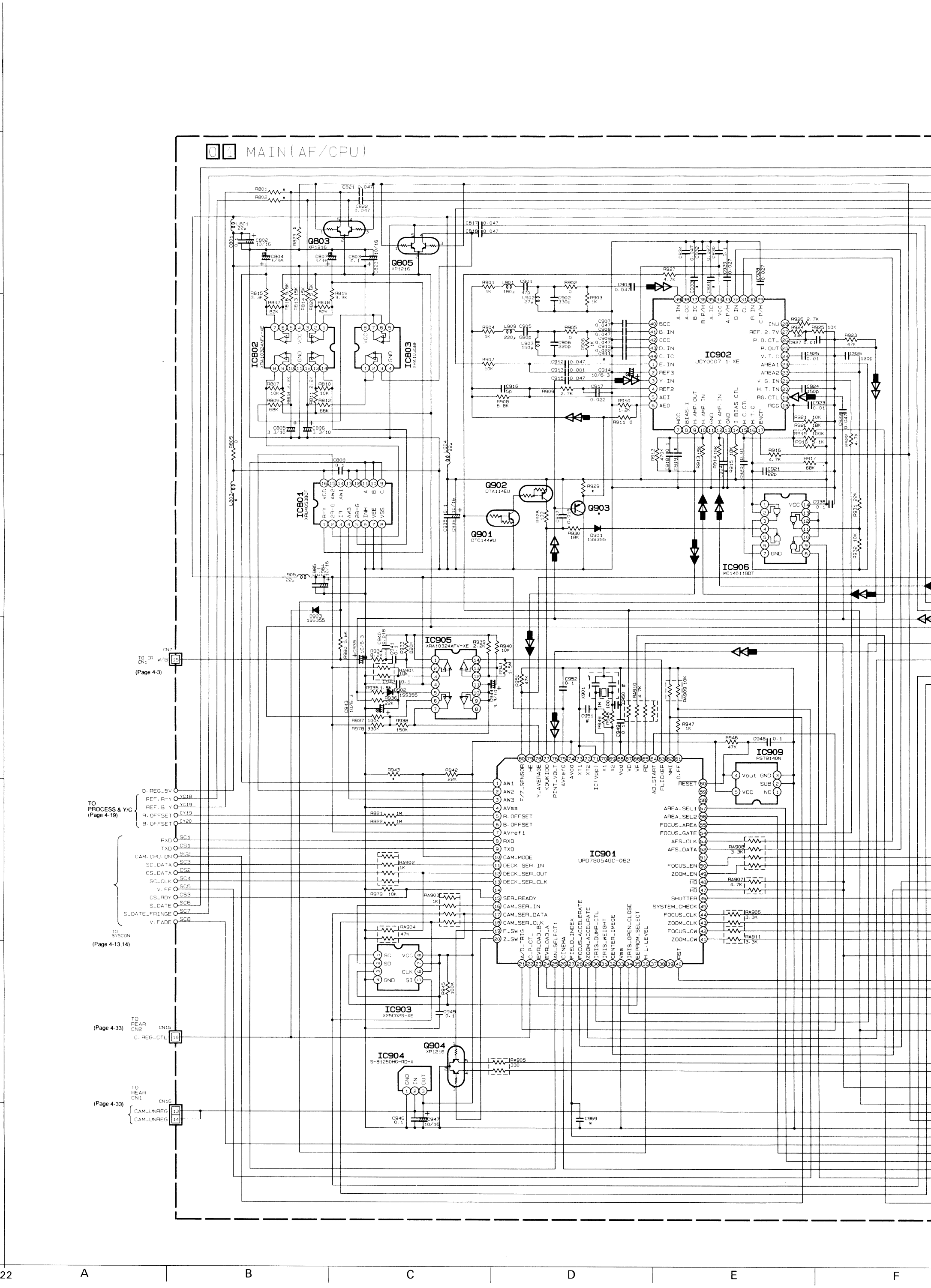
3. SIGNAL PATH SYMBOLS.
FOCUS IRIS

TO SECAM CN18 *
TO JIG CONNECTOR CN20
TO E.VF CN1, CN101 (Page4-41, 45)
TO REAR CN1 (Page4-33)
TO SYSCON (Page4-13, 14)
TO PRE/REC (Page4-26)
TO LINEAR AUDIO (Page4-18)
TO REAR CN2 (Page4-33)
TO E.VF CN1, CN101 (Page4-41, 45)
TO SYSCON (Page4-13, 14)
TO PRE/REC (Page4-26)
TO SYSCON (Page4-13, 14)

D502, D503 DAN222
Q503 2SC4617(QRS)
Q504~Q506 2SA1774(QRS)

F G H I J K

4.9 AF/CPU SCHEMATIC DIAGRAM



NOTES: 1. Mark(※)is not used.
2. SIGNAL PATH SYMBOLS.
FOCUS IRIS

3. COMPARISON CHART OF MODELS & MARKS(#)

REF NO.	MODELS	
	GR-AX350	GR-AX400/200
C950	10P	NOT USED
C951	10P	NOT USED

CN17 ※ TO SECAM

SECAM_Y
C. REG_5V
C. REG_5V
CAM_Y
R-Y
B-Y
ENCP
C. SYNC
C. BLK
VF. S. B-Y
VF. S. R-Y
SC_BLK
IDP
VD
HD
LSW
DATE
DATE_FRINGE
GND
GND
FSC
GND

TO OP BLOCK
CN11

5V
FOCUS_PTr
FOCUS_LED
ZOOMφ2
ZOOMφ4
ZOOMφ3
ZOOMφ1
FOCUSφ1
FOCUSφ2
FOCUSφ4
FOCUSφ3
DUMP+
DRIVE+
DUMP-
DRIVE-
HE_OUT-
HE_IN-
HE_OUT+
HE_IN+
ZOOM_PTr
ZOOM_LED
5V

C. REG_5V
GND
EVRLOAD_A
FSC
EVRLOAD_B
CAM. SER. DATA
CAM. SER. CLK
2R-G
2B-G
GAMMA_Y
V. REF
VF. S. R-Y
VF. S. B-Y
B-Y
R-Y
CAM_Y
SECAM_Y
IRIS_BLK
IRIS_DET
IRIS_ADJ
HALL. GAIN-
HALL. GAIN+
VAP
ENCP
CPOB
CP_AGC
P. BLK
FH/2
C. BLK
C. SYNC
CLK(9.53MHZ)
SP1
SP2
CDS_OUT
V. SUB_ADJ
FADE CTL
W. BLK

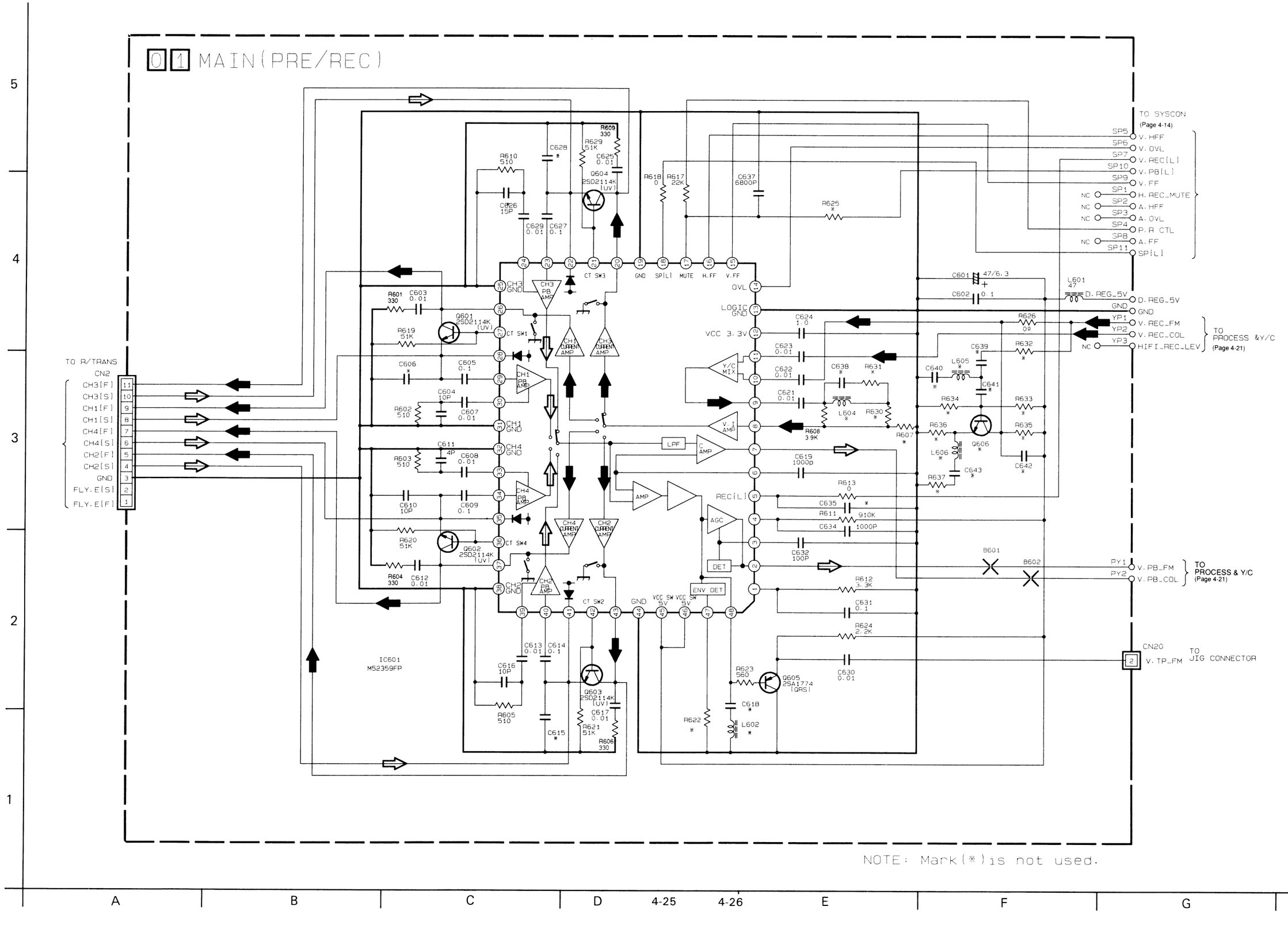
TO PROCESS & Y/C (Page 4-19)

TO CCD CN202 (Page 4-38)

CN12

VSUB_ADJ
CDS_OUT
FI
CH2
CH1
GND
VR
SHUT_CTL
GND
FCK
GND
CSYNC
CBLK
IDP
IRIS WIND
HD
LSW
VD
HG
ENCP
PBLK
CP_AGC
CPOB
AREA_SEL2
AREA_SEL1
CINEMA
AF_WIND_P
SC_BLK

4.10 PRE/REC SCHEMATIC DIAGRAM



4.11 MAIN CIRCUIT BOARD

FOIL SIDE (B)

PARTS LOCATION GUIDE <MAIN BOARD>

REF.No.	LOCATION
IC	
IC1	A-6D
IC2	A-5E
IC4	B-5E
IC5	B-5D
IC6	B-5D
IC301	B-1A
IC351	B-2D
IC401	B-1C
IC402	B-1C
IC501	B-5B
IC502	B-4A
IC503	B-6A
IC504	B-6C
IC505	B-6C
IC601	B-3B
IC801	B-2C
IC802	B-1B
IC803	B-1B
IC804	A-4D
IC805	A-4D
IC901	A-3C
IC902	A-2C
IC903	B-3D
IC904	B-3D
IC905	B-1B
IC906	A-2C
IC907	B-3D
IC908	A-3D
IC909	B-3C
IC910	B-3E
IC911	A-4E
TRANSISTOR	
Q1	B-5E
Q2	B-6E
Q3	B-6E
Q5	B-6E
Q6	B-6E
Q7	B-6E
Q8	B-6E
Q9	B-6E
Q10	B-5D
Q201	A-5D
Q202	A-4D
Q203	B-4D
Q351	B-2E
Q401	B-1C
Q402	B-1C
Q403	B-1D
Q404	B-2C
Q405	B-2D
Q406	B-2C
Q407	B-2C
Q408	B-1D
Q501	B-5A
Q502	B-4B
Q503	B-5A
Q504	B-5A
Q505	A-5A
Q506	B-6A
Q507	B-6B
Q508	B-5A
Q509	A-6A
Q581	A-4B
Q582	A-4B
Q583	A-4B
Q601	B-3A
Q602	B-3A
Q603	A-3B
Q604	A-3B
Q605	A-3B
Q606	A-3B
Q701	B-4A
Q704	A-5A
Q706	A-4B
Q751	B-6C
Q752	B-6C
Q781	B-2A
Q782	B-2A
Q783	B-2A
Q784	B-2A
Q802	A-4D
Q803	B-2B
Q804	A-4D
Q805	B-1B
Q810	B-5C
Q811	B-5C
Q812	B-4B
Q901	B-2C
Q902	A-2C
Q903	B-2C
Q904	A-4D
Q905	B-3E
Q906	B-4E
Q907	B-3E
DIODE	
D2	B-6D
D3	B-6E
D201	B-5D
D301	B-1A
D501	B-6B
D502	B-6B
D503	B-6B
D504	B-6B
D505	B-6D
D507	B-6B
D801	B-4D
D802	B-4D
D803	B-4D
D901	A-2C
D902	A-1B
D903	A-2B
D904	A-4E
DA1	B-5E
DA2	B-5D
DA3	B-5E
RESISTOR	
R1	B-4D
R2	B-5D
R3	A-5E
R4	A-4E
R5	B-5D
R6	B-5D
R7	B-5D
R8	B-5D
R9	B-5D
R10	B-5D
R11	B-5E
R12	B-5E
R13	B-5E
R14	B-5E
R15	B-6D
R16	B-6D
R22	B-6E
R23	B-6D
R24	B-6D
R25	B-6E
R26	B-6D
R27	B-6E
R28	B-5E
R29	B-6E
R30	B-6E
R31	B-6E
R32	B-6E
R33	B-6E
R34	B-6E
R35	B-6E
R36	A-6D
R37	B-6E
R38	A-6D
R39	A-6D
R40	B-6D
R41	B-6D
R43	A-5E
R53	A-5E
R60	A-5D
R61	A-5D
R62	A-6D
R63	A-6D
R67	B-6E
R68	A-6E
R69	B-5D
R70	B-4E
R71	A-5E
R72	A-6C
R73	A-3D
R74	B-5E
R75	B-5D
R201	B-5E
R202	B-5E
R203	B-5E
R204	B-5E
R205	B-5D
R206	B-5D
R207	A-5D
R208	A-5D
R209	A-4D
R210	B-5D
R211	B-6E
R212	B-6E
R213	A-5E
R214	A-6E
R215	B-4D
R216	A-5D
R301	A-1B
R302	A-1A
R303	A-1A
R304	B-2A
R305	B-2A
R306	A-1B
R307	A-2B
R308	A-1B
R309	B-2B
R310	B-2B
R311	A-1B
R312	A-1B
R313	B-1A
R314	A-1B
R351	B-2D
R352	B-2D
R353	B-2D
R354	B-2D
R355	A-3D
R356	A-3D
R357	A-3D
R358	B-2E
R359	B-2E
R360	B-2D
R361	B-2D
R362	B-2E
R401	A-1D
R402	A-1D
R403	A-1D
R404	B-2C
R405	B-2C
R406	B-2C
R407	B-2C
R409	A-1D
R410	B-1D
R411	B-1D
R412	B-1D
R413	B-2D
R414	A-1C
R415	A-1C
R416	A-2C
R417	A-1C
R418	A-1C
R419	A-1C
R420	A-2C
R421	B-1D
R422	B-1D
R423	B-1C
R424	B-1C
R425	B-1C
R426	B-1D
R428	A-1C
R429	B-1C
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R455	A-1D
R456	B-1D
R457	B-1D
R458	B-1C
R459	A-2D
R501	A-5C
R502	A-5B
R503	A-5B
R504	B-4B
R505	B-4B
R506	B-4B
R507	B-5B
R508	B-4B
R509	A-5B
R510	A-5B
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R516	B-5A
R517	B-6B
R518	B-6B
R519	A-6B
R520	A-6B
R521	B-6B
R522	A-6B
R523	A-6B
R524	A-6B
R525	B-6B
R526	B-6C
R527	B-6C
R528	B-6B
R529	B-6C
R530	B-6C
R531	A-6C
R532	A-6C
R533	B-6B
R534	B-6B
R535	A-6B
R536	B-4B
R537	B-6D
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R543	A-6B
R544	A-6C
R545	A-6C
R546	A-6D
R560	B-6A
R562	B-5A
R563	B-5A
R564	B-5A
R565	B-5A
R566	B-5A
R567	B-5A
R568	B-5A
R569	B-5A
R570	B-5A
R571	A-5A
R572	A-5A
R573	B-5A
R574	B-5A
R575	B-5A
R576	A-6A
R577	A-6A
R578	A-5B
R581	A-4B
R582	B-4B
R583	B-4B
R584	B-4B
R585	B-4B
R586	B-4B
R587	B-4C
R588	B-4C
R589	A-5C
R601	B-3A
R602	A-3B
R603	A-3B
R604	B-4A
R605	B-3A
R606	B-4A
R607	B-3B
R608	B-3A
R609	B-3A
R610	B-3A
R611	B-4B
R612	A-3B
R613	B-3B
R617	B-2B
R618	B-2B
R619	B-3A
R620	B-4A
R621	B-4B
R622	B-4B
R623	B-4B
R624	B-3B
R625	B-2B
R626	A-4B
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R630	B-3B
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R702	A-4A
R703	A-4A
R704	A-4A
R708	B-4A
R709	A-4A
R710	A-4A
R711	A-4A
R718	A-4A
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R731	A-5A
R732	A-5A
R733	B-5A
R734	B-5A
R735	A-5B
R736	A-5A
R738	B-5A
R739	A-2C
R740	A-5A
R741	A-4B
R751	A-6B
R752	A-6B
R753	A-6B
R754	A-6B
R755	A-6B
R756	A-6B
R757	A-6C
R758	A-6C
R759	A-6C
R760	A-6C
R761	A-6C
R762	A-6C
R763	A-4A
R781	A-2A
R782	B-2A
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R784	B-2A
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R786	B-2A
R787	B-2A
R788	B-2A
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R802	B-2B
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R807	A-1B
R808	A-1B
R809	B-1B
R810	A-1B
R811	A-1B
R812	B-2B
R813	B-2B
R814	B-2B
R815	A-2B
R816	A-2B
R817	A-2B
R818	A-2B
R819	A-2B
R820	A-2B
R821	A-4D
R822	A-4D
R823	A-2B
R824	B-4D
R825	A-4D
R826	A-4D
R827	A-4D
R828	B-3D
R829	A-4D
R830	B-4D
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R835	B-4D
R836	B-3D
R837	B-3D
R838	B-3D
R839	B-3D
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R841	A-4D
R842	A-4D
R843	B-4D
R844	B-4D
R845	A-4D
R846	A-4D
R847	B-4D
R848	B-4D
R851	B-4D
R852	B-4D
R853	B-4D
R854	B-4D
R855	B-4D
R856	B-4D
R857	A-4E
R858	B-4D
R859	A-4E
R861	B-4C
R862	B-4C
R863	B-4C
R864	B-4C
R865	B-5C
R866	B-5C
R867	B-5C
R868	B-5C
R869	B-5C
R870	B-5C
R871	B-5C
R872	B-5C
R873	B-4B
R874	B-4B
R875	B-4B
R876	A-5B
R877	B-5C
R878	B-5C
R879	B-4B
R880	B-4C
R881	B-4B
R882	B-5C
R883	A-5B
R884	A-5C
R885	B-4B
R886	B-4C
R887	A-5B
R888	A-5B
R890	B-4B
R891	B-4C
R892	B-4C
R893	B-6B
R894	A-6A
R895	A-6A
R896	A-6A
R897	A-6A
R898	A-5C
R901	B-2D
R902	B-2D
R903	B-2C
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R907	B-2C
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R909	A-3D
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R916	A-3C
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R919	B-2C
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R921	B-3C
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R934	B-1B
R935	A-1B
R936	A-1B
R937	B-1B
R938	B-1B
R939	A-1B
R940	A-1B
R941	A-1B
R942	A-3D
R943	A-3D
R945	B-3C
R946	B-3C
R947	B-3C
R948	B-3C
R949	B-3C
R950	B-3C
R951	A-4E
R952	B-3E
R953	B-3E
R954	B-3E
R955	B-3E
R956	B-4E
R957	B-4E
R958	B-4E
R959	B-4E
R960	A-4E
R961	A-4E
R962	A-4E
R963	A-4E
R964	B-4E
R965	B-3E
R966	B-3E
R967	B-3D
R968	B-3D
R969	B-3D
R970	A-4E
R971	A-3D
R972	A-3D
R973	A-3D
R974	A-3D
R975	A-3D
R978	B-1B
R979	B-4D
R980	B-2B
R981	B-3E
R982	B-3E
R984	A-4E
R985	A-4E
NETWORK RESISTOR	
RA1	B-6D
RA2	B-6D
RA3	A-5D
RA4	A-4E
RA5	A-5E
RA6	A-5D
RA7	B-5D
RA8	B-5E
RA9	B-6E
RA10	B-6E
RA11	B-5E
RA12	B-6E
RA13	B-6E
RA14	B-6D
RA15	B-6D
RA16	A-4D
RA501	B-6B
RA801	A-6B
RA802	A-6B
RA901	B-1B
RA902	B-4C
RA903	A-3D
RA904	A-3D
RA905	A-3D
RA906	B-3C
RA907	B-3C
RA908	B-3C
RA909	B-3C
RA910	B-3C
RA911	B-3C
CAPACITOR	
C1	B-6C
C2	A-6D
C3	A-6D
C4	B-6D
C5	B-5D
C6	A-5D
C7	A-5D
C8	A-6B
C9	B-4E
C10	B-4E
C11	B-5E
C12	A-4E
C13	B-4E
C14	B-5E
C15	B-5E
C16	B-5D
C18	B-6D
C19	B-6D
C21	B-6D
C22	B-6D
C23	A-5D
C24	A-5D
C25	A-4E
C26	A-5E
C27	B-4E
C30	B-5D
C201	B-5E
C202	B-5E
C203	B-5E
C204	B-5E
C205	B-5D
C206	B-5D
C207	A-5D
C208	A-5D
C209	A-5D
C210	A-6D
C212	B-6D
C213	B-6D
C214	A-5D
C215	A-4D
C301	A-1B
C302	A-1A
C303	A-1A
C304	A-2A
C305	B-2A
C306	B-2A
C307	A-1A
C308	A-1B
C309	A-1A
C310	B-2B
C311	B-2B
C312	B-2A
C313	B-2A
C314	A-1B
C315	A-1B
C316	A-2B
C351	B-2E
C352	B-2E
C353	B-2E
C354	B-2E
C355	B-2E
C356	A-3E
C357	A-3E
C358	A-2D
C359	A-2D
C360	A-2D
C361	A-3D
C362	B-2D
C363	A-2D
C401	A-1D
C402	A-2C
C403	A-2C
C404	B-2C
C405	A-1C
C406	A-1C
C407	A-1C
C408	B-2C
C409	B-1D
C410	B-1D
C411	B-1C
C412	A-1C
C413	B-1D
C414	B-1D
C415	B-1C
C417	B-1C
C418	B-1C
C419	A-1C
C420	A-2C
C422	A-1C
C423	A-2C
C424	B-1C

REF.No.	LOCATION
C425	A-1C
C427	A-1C
C428	B-1C
C429	A-1C
C430	B-1C
C431	B-1C
C432	B-1C
C433	A-1C
C434	A-1C
C435	A-1C
C436	A-1C
C437	B-1D
C438	A-1D
C439	B-1D
C440	B-1D
C441	B-2C
C443	A-1C
C501	A-6A
C502	A-5C
C503	B-4B
C504	A-5C
C505	A-5B
C506	A-5B
C507	B-4B
C508	A-5B
C509	A-5B
C510	A-5B
C511	B-4B
C512	B-5B
C513	B-4B
C514	A-5B
C515	A-5B
C516	A-5B
C517	A-5B
C518	B-5A
C519	B-5A
C520	A-5A
C521	B-5A
C522	B-6B
C523	B-5A
C524	A-5B
C525	A-5B
C526	A-5B
C527	A-5B
C528	B-5A
C529	B-5A
C530	B-6B
C531	B-6B
C532	B-6B
C533	A-6B
C534	A-6B
C535	B-6B
C536	B-6B
C537	A-6B
C538	B-6B
C539	A-6B
C540	A-6B
C541	A-5B
C542	A-5C
C543	A-5B
C544	A-5B
C545	A-4B
C547	B-4B
C548	B-4B
C549	A-6B
C561	B-6A
C562	A-6A
C563	B-6A
C564	A-6A
C565	B-6A
C566	B-6A
C567	B-6A
C568	A-6A
C569	A-6A
C570	B-6A
C571	B-6A
C572	B-6A
C573	B-6A
C574	B-5A
C575	B-5A
C576	B-5A
C577	B-5A
C578	B-5A
C579	B-6A
C581	A-5B
C582	A-4B
C601	A-2B
C602	B-4B
C603	B-3A
C604	A-3B
C605	B-3A
C606	A-3A
C607	A-3B
C608	A-3A
C609	B-3A
C610	A-3A
C611	A-3B
C612	B-4A
C613	A-4A
C614	B-4B
C615	A-3A
C616	B-3A
C617	B-4B
C618	B-3B
C619	A-3B
C621	B-3B
C622	B-3B
C623	B-3B
C624	B-3B
C625	B-3B
C626	B-3A
C627	B-3B
C628	A-3B
C629	A-3B
C630	B-3B
C631	A-3B
C632	A-3B
C634	B-4B
C635	B-3B
C637	B-3B
C638	A-3B
C639	A-3B
C640	A-3B
C641	A-3B
C642	A-3B
C643	A-3B
C701	A-5A
C702	A-4A
C703	A-4A
C704	A-4A
C705	B-4A
C706	B-4A
C707	A-4A
C708	A-4B
C709	A-4B
C710	A-4A
C711	B-4B
C712	A-4A
C715	A-5A
C716	A-5A
C718	A-5A
C719	A-5A
C720	A-4A
C721	B-5A
C722	B-5A
C723	A-5B
C724	B-5A
C725	B-5A
C752	A-6C
C753	A-6C
C754	B-6C
C755	B-6C
C756	B-6C
C757	B-6C
C758	B-6C
C759	A-6D
C760	B-6C
C761	B-6C
C781	A-2A
C782	A-2A
C783	B-2A
C784	B-2A
C785	A-2A
C786	B-2A
C787	A-2A
C801	A-2B
C802	A-1B
C803	B-1B
C804	A-2B
C805	A-1B
C806	A-1B
C807	A-2B
C808	B-2C
C809	A-4D
C810	A-3D
C811	B-4D
C812	B-4E
C813	B-4E
C814	A-4D
C815	B-4D
C816	B-4D
C817	B-1B
C818	B-2B
C819	A-4E
C820	A-4E
C821	B-2B
C822	B-2B
C823	A-2B
C824	B-4D
C831	B-6B
C832	B-6B
C833	B-6C
C834	B-6C
C835	B-6C
C836	B-5C
C837	B-5C
C838	A-5C
C839	A-5C
C840	B-5C
C841	B-5C
C842	B-5C
C843	A-5C
C844	B-5C
C845	B-5C
C846	B-5C
C847	B-5C
C848	B-5C
C850	A-4B
C851	B-5B
C852	A-5B
C853	B-5B
C854	A-5D
C855	B-5C
C856	B-5C
C857	B-5C
C858	A-5C
C859	A-5B
C901	B-2D
C902	B-2D
C903	B-2D
C904	B-3C
C905	B-2D
C906	B-3D
C907	A-2D
C908	B-2D
C909	A-2D
C910	A-2D
C911	A-2D
C912	B-2C
C913	B-2C
C914	A-2D
C915	B-2C
C916	B-3D
C917	A-3D
C918	B-2C
C919	A-3C
C920	B-2C
C921	B-3C
C922	B-2C
C923	B-2C
C924	B-2C
C925	B-2C
C926	B-2C
C927	B-2C
C928	A-2C
C929	A-2C
C930	A-2C
C931	A-2C
C932	A-2C
C933	A-2C
C934	A-2C
C935	A-2C
C936	A-2B
C937	A-2C
C938	A-2C
C939	A-1B
C940	B-1B
C941	A-1B
C942	B-1B
C943	A-1B
C944	A-1B
C945	B-3C
C946	B-3D
C947	A-3D
C948	B-3C
C949	A-3C
C950	B-3C
C951	B-3C
C952	B-3C
C953	A-4D
C954	B-4E
C955	B-4E
C956	A-3E
C957	A-4E
C958	B-3E
C959	A-4E
C960	A-4E
C961	A-4C
C962	B-4D
C963	B-3D
C964	B-3D
C965	B-3D
C966	B-3E
C967	B-3D
C968	B-3D
C969	A-3C
C970	B-4C
C971	B-4E
C972	A-3D
C973	A-3D
C974	A-3D
C975	A-3D
C976	A-3D
C977	A-3D
C981	A-3D
C982	B-3D
C983	A-3E
C984	A-1B
C985	A-3D

COIL	
L1	B-5E
L401	A-1D
L402	B-1D
L501	B-6A
L502	A-5A
L503	B-5A
L504	A-5B
L505	B-4B
L507	A-6B
L510	A-6A
L511	B-5A
L601	A-2B
L602	A-3B
L604	A-3B
L605	A-3B
L606	A-3B
L701	B-5A
L702	A-4A
L703	A-4B
L704	A-4A
L705	A-4A
L707	A-5A
L708	A-5B
L709	B-5A
L752	A-6C
L753	A-6C
L781	A-2A
L782	A-2A
L783	A-2A
L801	A-1B
L802	B-3D
L803	B-1B
L805	B-4C
L806	B-5C
L901	B-2D
L902	B-2D
L903	B-2D
L904	B-2B
L905	A-1B
L906	B-4E
L907	B-4C
L908	A-3E
L909	B-2D

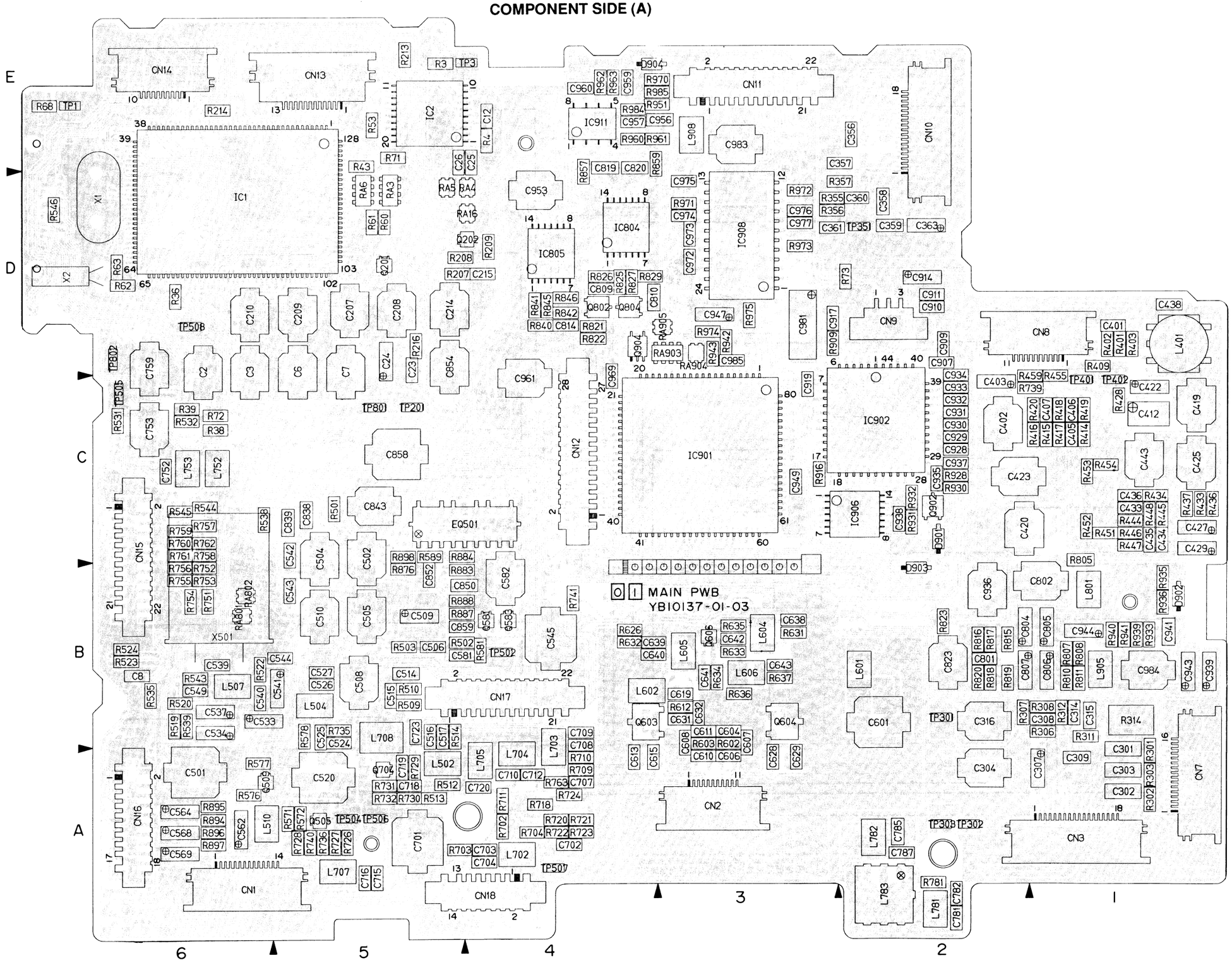
EQUALIZER	
EQ501	A-4C

RESONATOR	
X901	B-3C

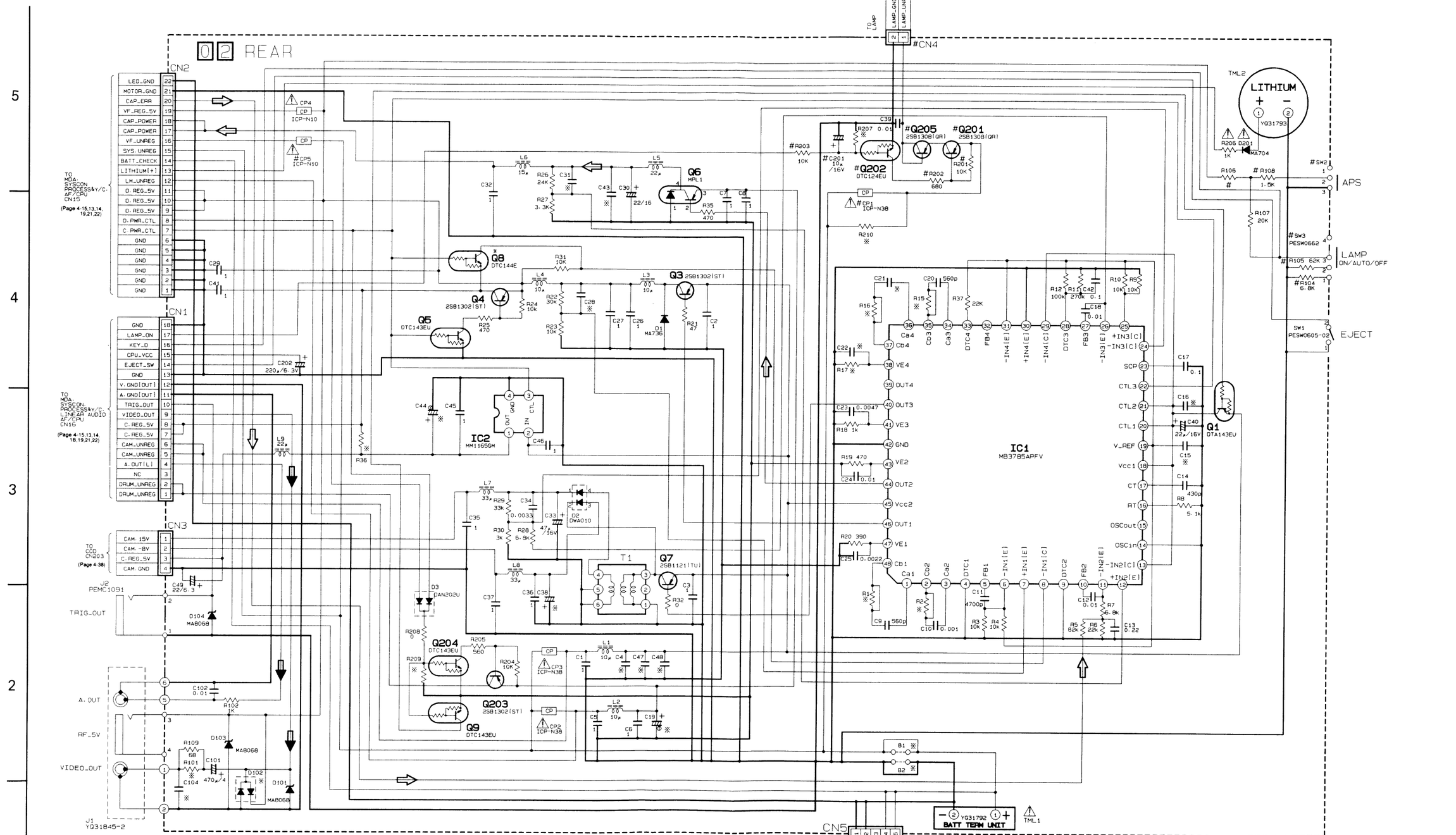
CONNECTOR	
CN1	A-6A
CN2	A-3A
CN3	A-1A
CN4	B-1A
CN6	B-1C
CN7	A-1A
CN8	A-2D
CN9	A-2D
CN10	A-2E
CN11	A-3E
CN12	A-4C
CN13	A-5E
CN14	A-6E
CN15	A-6C
CN16	A-6A
CN17	A-4B
CN18	A-4A
CN20	B-6D

TEST PIN	
TP1	A-6E
TP3	A-4E
TP201	A-5C
TP301	A-2B
TP302	A-2A
TP303	A-2A
TP351	A-2D
TP401	A-1C
TP402	A-1C
TP502	A-4B
TP504	A-5A
TP505	A-6C
TP506	A-5A
TP507	A-4A
TP508	A-6D
TP602	A-4A
TP801	A-5C
TP802	A-4D

COMPONENT SIDE (A)



4.12 REAR SCHEMATIC DIAGRAM



NOTES: 1. Mark(※)is not used.
2. COMPARISION CHART OF MODELS & MARKS(#)

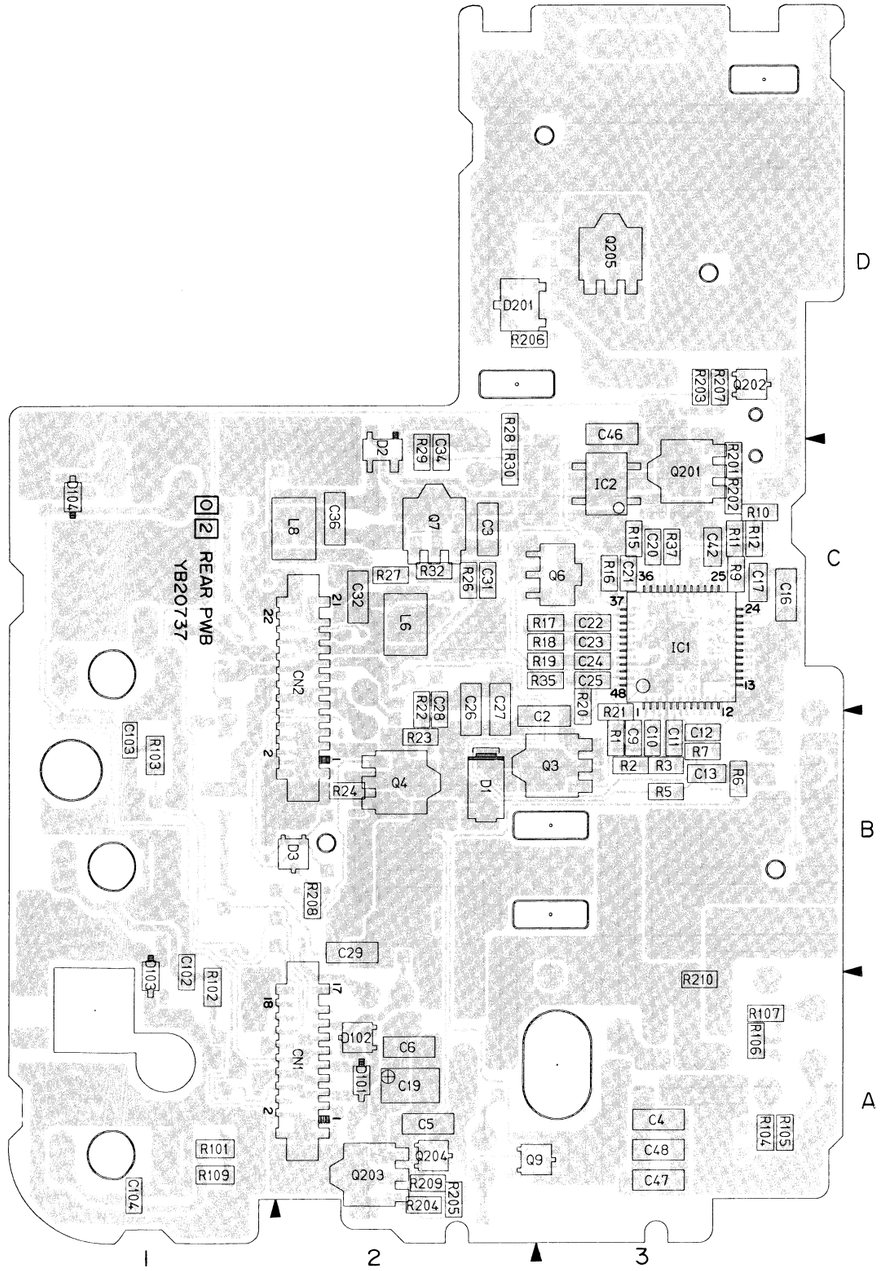
REF. NO	MODELS		
	GR-AX400	GR-AX350	GR-AX200
Q201	USED	NOT USED	NOT USED
Q202	USED	NOT USED	NOT USED
Q205	USED	NOT USED	NOT USED
R104	USED	NOT USED	NOT USED
R105	USED	NOT USED	NOT USED
R106	1.5K	0	0
R108	USED	NOT USED	NOT USED
R201	USED	NOT USED	NOT USED

REF. NO	MODELS		
	GR-AX400	GR-AX350	GR-AX200
R202	USED	NOT USED	NOT USED
R203	USED	NOT USED	NOT USED
C201	USED	NOT USED	NOT USED
CP1	USED	NOT USED	NOT USED
CP5	NOT USED	USED	NOT USED
SW2	USED	NOT USED	NOT USED
SW3	USED	NOT USED	NOT USED
CN4	USED	NOT USED	NOT USED

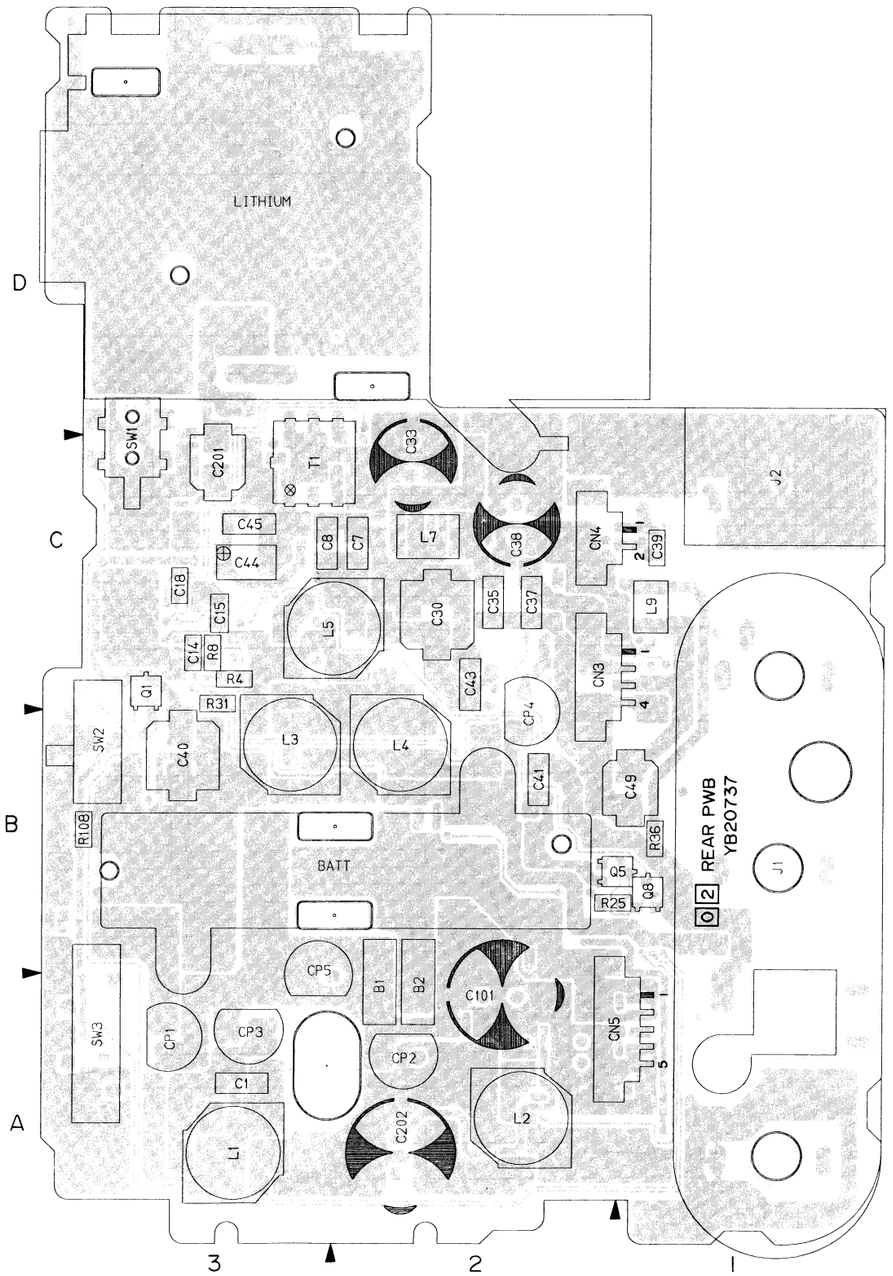
4.13 REAR AND APS CIRCUIT BOARDS

– REAR –

FOIL SIDE (B)

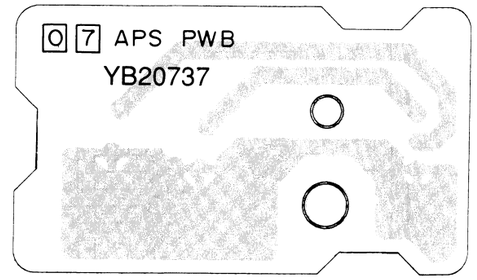


COMPONENT SIDE (A)

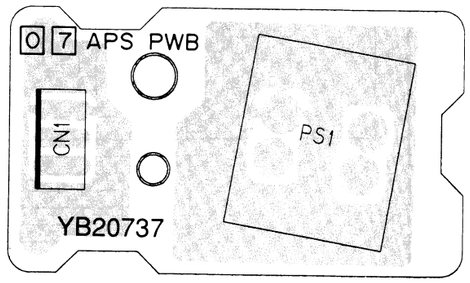


–APS–

FOIL SIDE (B) [for GR-AX400]



COMPONENT SIDE (A)

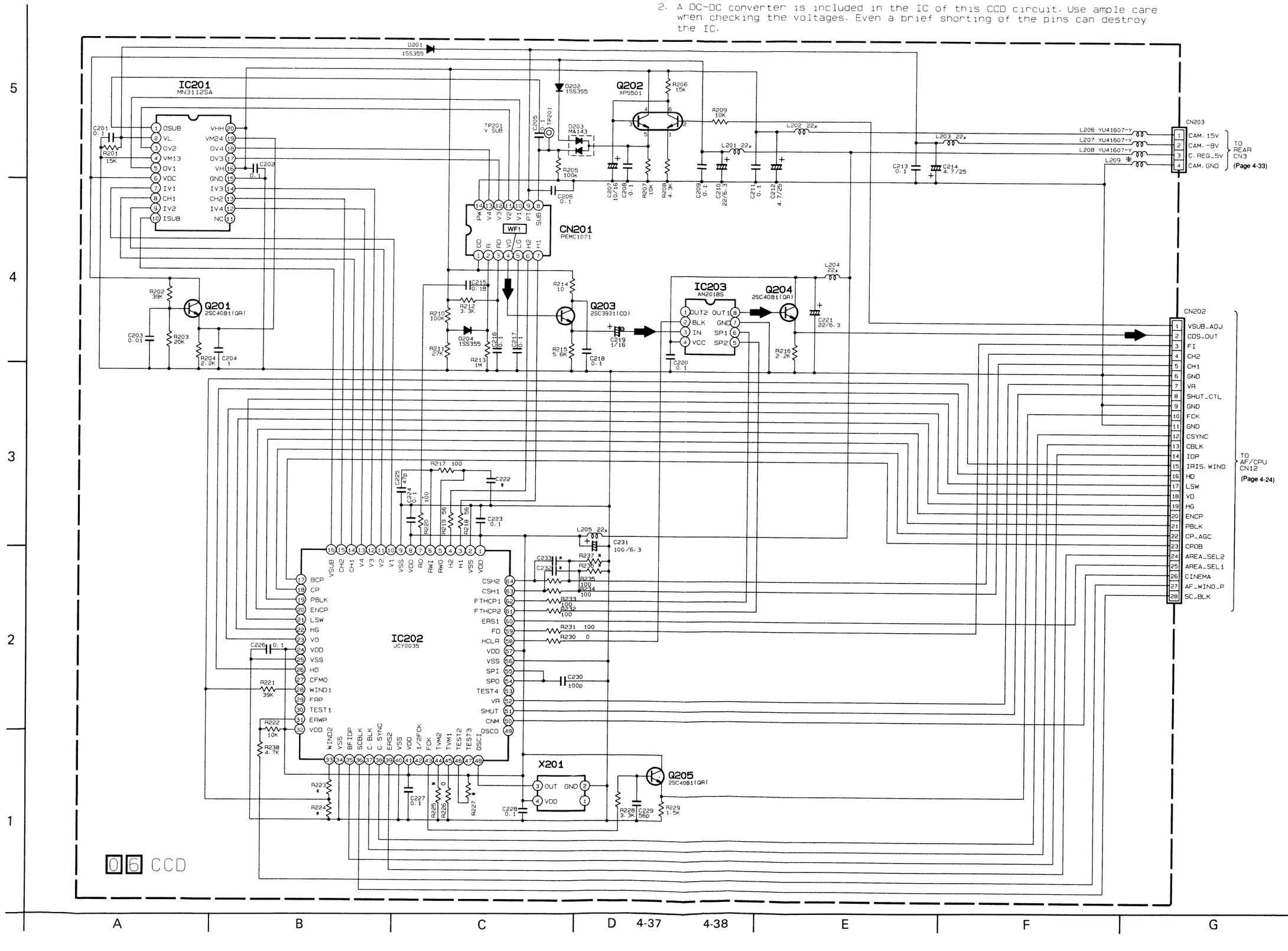


PARTS LOCATION GUIDE <REAR BOARD>

REF.No.	LOCATION
IC	
IC1	B-3C
IC2	B-3C
TRANSISTOR	
Q1	A-3C
Q3	B-3B
Q4	B-2B
Q5	A-1B
Q6	B-3C
Q7	B-2C
Q8	A-1B
Q9	B-2A
Q201	B-3C
Q202	B-3D
Q203	B-2A
Q204	B-2A
Q205	B-3D
DIODE	
D1	B-2B
D2	B-2C
D3	B-2B
D101	B-2A
D102	B-2A
D103	B-1B
D104	B-1C
D201	B-2D
RESISTOR	
R1	B-3B
R2	B-3B
R3	B-3B
R4	A-3C
R5	B-3B
R6	B-3B
R7	B-3B
R8	A-3C
R9	B-3C
R10	B-3C
R11	B-3C
R12	B-3C
R15	B-3C
R16	B-3C
R17	B-2C
R18	B-2C
R19	B-2C
R20	B-3B
R21	B-3B
R22	B-2B
R23	B-2B
R24	B-2B
R25	A-1B
R26	B-2C
R27	B-2C
R28	B-2D
R29	B-2C
R30	B-2C
R31	A-3C
R32	B-2C
R35	B-2C
R36	A-1B
R37	B-3C
R101	B-1A
R102	B-1A
R103	B-1B
R104	B-3A
R105	B-3A
R106	B-3A
R107	B-3A
R108	A-3B
R109	B-1A
R201	B-3C
R202	B-3C
R203	B-3D
R204	B-2A
R205	B-2A
R206	B-2D
R207	B-3D
R208	B-2B
R209	B-2A
R210	B-3A
CAPACITOR	
C1	A-3A
C2	B-2B
C3	B-2C
C4	B-3A
C5	B-2A
C6	B-2A
C7	A-2C
C8	A-3C
C9	B-1B
C10	B-1B
C11	B-1B
C12	B-1B
C13	B-1B
C14	A-3C
C15	A-3C
C16	B-3C
C17	B-3C
C18	A-3C
C19	B-2A
C20	B-3C
C21	B-3C
C22	B-3C
C23	B-3C
C24	B-3C
C25	B-3C
C26	B-2B
C27	B-2B
C28	B-2B
C29	B-2B
C30	A-2C
C31	B-2C
C32	B-2C
C34	B-2C
C35	A-2C
C36	B-2C
C37	A-2C
C39	A-1C
C40	A-3C
C41	A-3B
C42	B-3C
C43	A-2C
C44	A-3C
C45	A-3C
C46	B-3D
C47	B-3A
C48	B-3A
C49	A-3C
C102	B-1B
C103	B-1B
C104	B-1A
C201	A-3C
COIL	
L1	A-3A
L2	A-2A
L3	A-3B
L4	A-2B
L5	A-3C
L6	B-2C
L7	A-2C
L8	B-2C
L9	A-1C
SWITCH	
SW1	A-3C
SW TRANS	
T1	A-3C
CONNECTOR	
CN1	B-2A
CN2	B-2C
CN3	A-2C
CN4	A-2C
CN5	A-1A
CP	
CP1	A-3A
CP2	A-2A
CP3	A-3A
CP4	A-2B
CP5	A-3B

4.14 CCD SCHEMATIC DIAGRAM

NOTES: 1. Mark(※)is not used.
2. A DC-DC converter is included in the IC of this CCD circuit. Use ample care when checking the voltages. Even a brief shorting of the pins can destroy the IC.

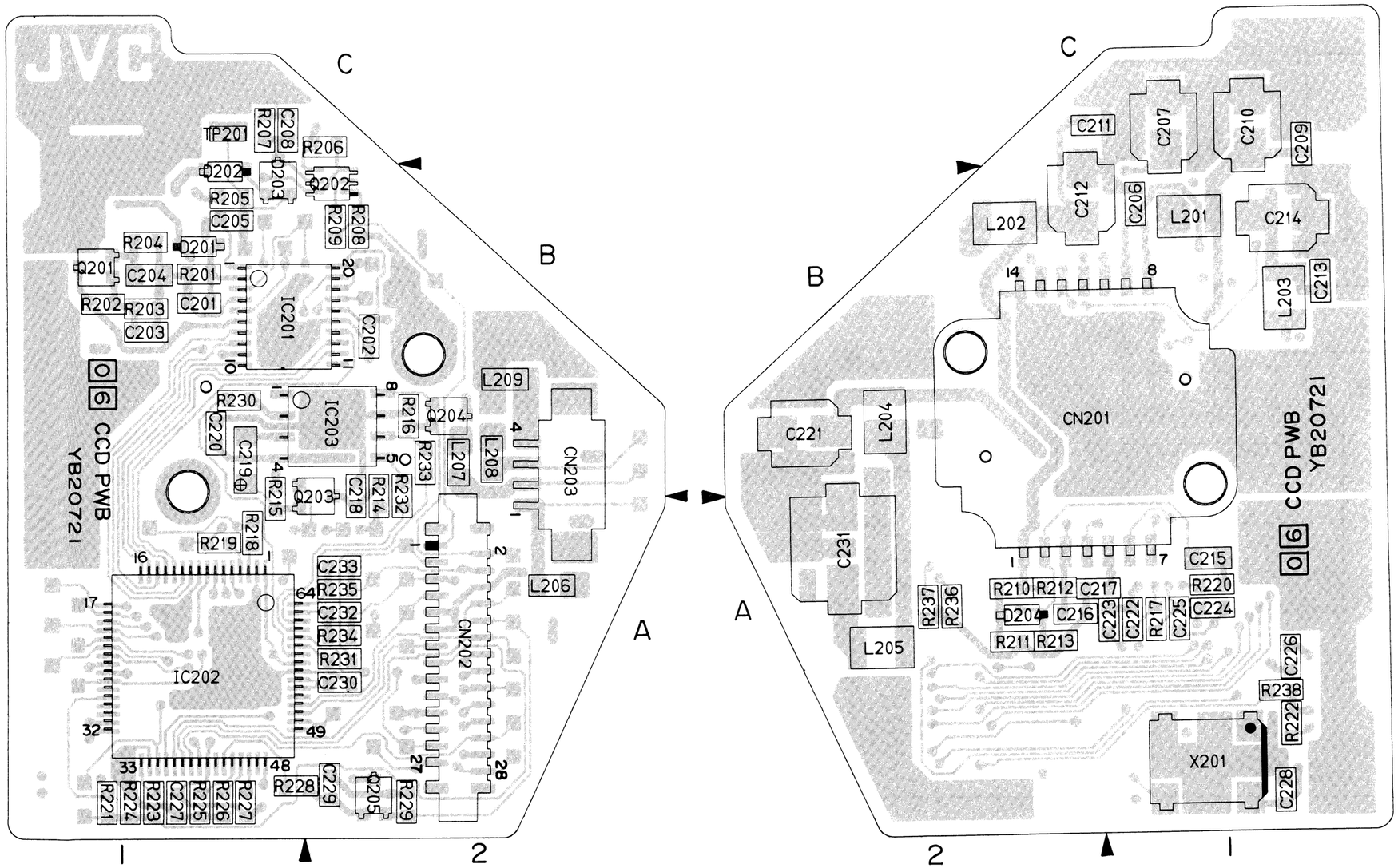


4.15 CCD AND UPPER DRUM CIRCUIT BOARDS

– CCD –

FOIL SIDE (B)

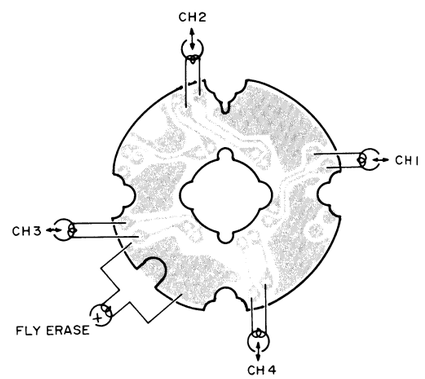
COMPONENT SIDE (A)



PARTS LOCATION GUIDE <CCD BOARD>

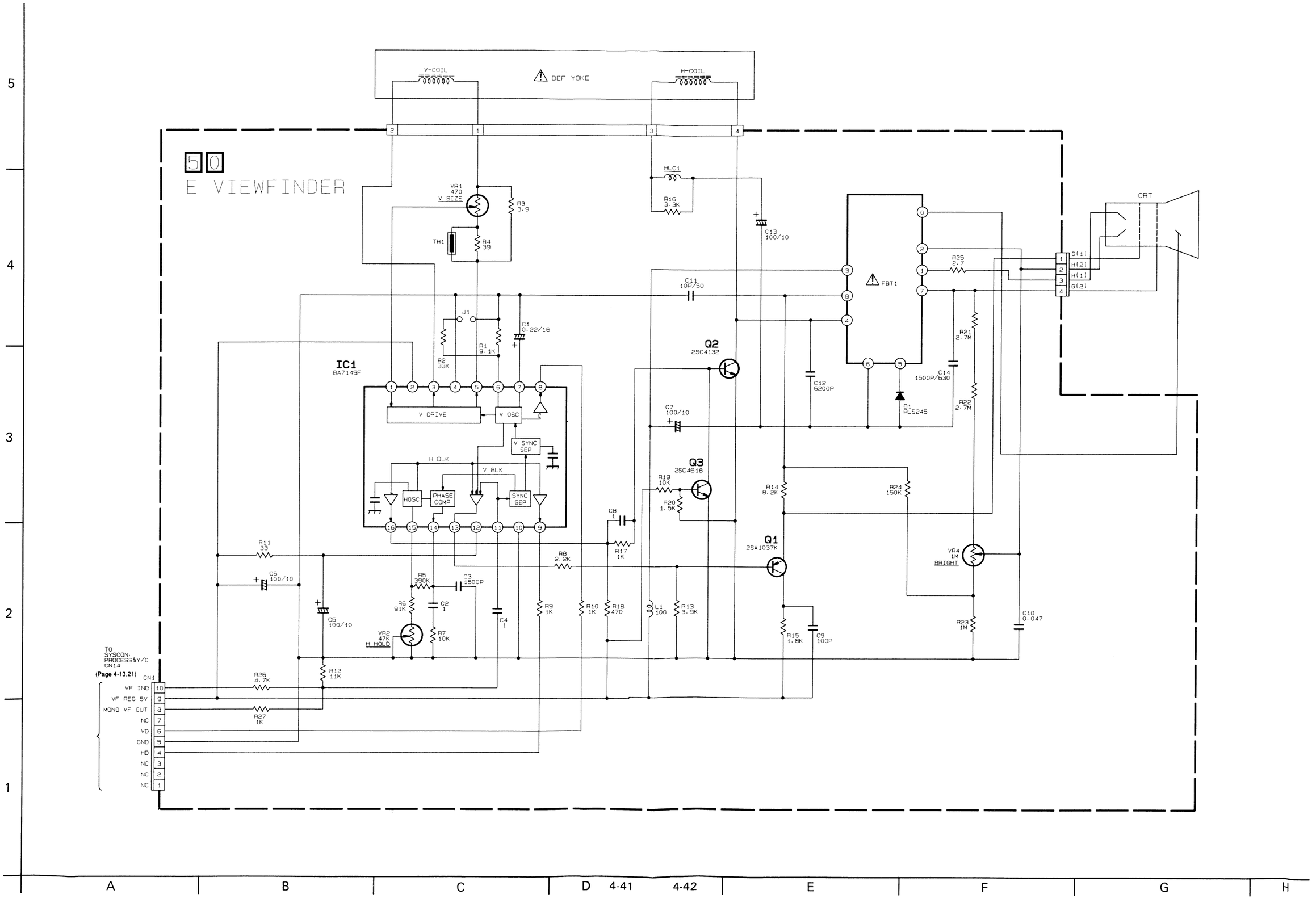
REF.No.	LOCATION	REF.No.	LOCATION
IC		CAPACITOR	
IC201	B-1B	C201	B-1B
IC202	B-1A	C202	B-2B
IC203	B-2B	C203	B-1B
TRANSISTOR		C204	B-1B
Q201	B-1B	C205	B-1B
Q202	B-2B	C206	A-1B
Q203	B-2B	C207	A-1C
Q204	B-2B	C208	B-1C
Q205	B-2A	C209	A-1C
DIODE		C210	A-1C
D201	B-1B	C211	A-2C
D202	B-1B	C212	A-2B
D203	B-1B	C213	A-1B
D204	A-2A	C214	A-1B
RESISTOR		C215	A-1A
R201	B-1B	C216	A-2A
R202	B-1B	C217	A-1A
R203	B-1B	C218	B-2A
R204	B-1B	C219	B-1B
R205	B-1B	C220	B-1B
R206	B-2C	C221	A-2B
R207	B-1C	C222	A-1A
R208	B-2B	C223	A-1A
R209	B-2B	C224	A-1A
R210	A-2A	C225	A-1A
R211	A-2A	C226	A-1A
R212	A-2A	C227	B-1A
R213	A-2A	C228	A-1A
R214	B-2A	C229	B-2A
R215	B-1A	C230	B-2A
R216	B-2B	C231	A-2A
R217	A-1A	C232	B-2A
R218	B-1A	C233	B-2A
R219	B-1A	COIL	
R220	A-1A	L201	A-1B
R221	B-1A	L202	A-2B
R222	A-1A	L203	A-1B
R223	B-1A	L204	A-2B
R224	B-1A	L205	A-2A
R225	B-1A	L206	B-2A
R226	B-1A	L207	B-2B
R227	B-1A	L208	B-2B
R228	B-1A	L209	B-2B
R229	B-2A	RESONATOR	
R230	B-1B	X201	A-1A
R231	B-2A	CONNECTOR	
R232	B-2A	CN201	A-2B
R233	B-2B	CN202	B-2A
R234	B-2A	CN203	B-2B
R235	B-2A	TEST PIN	
R236	A-1A	TP201	B-1C
R237	A-1A		
R238	A-1A		

– UPPER DRUM –

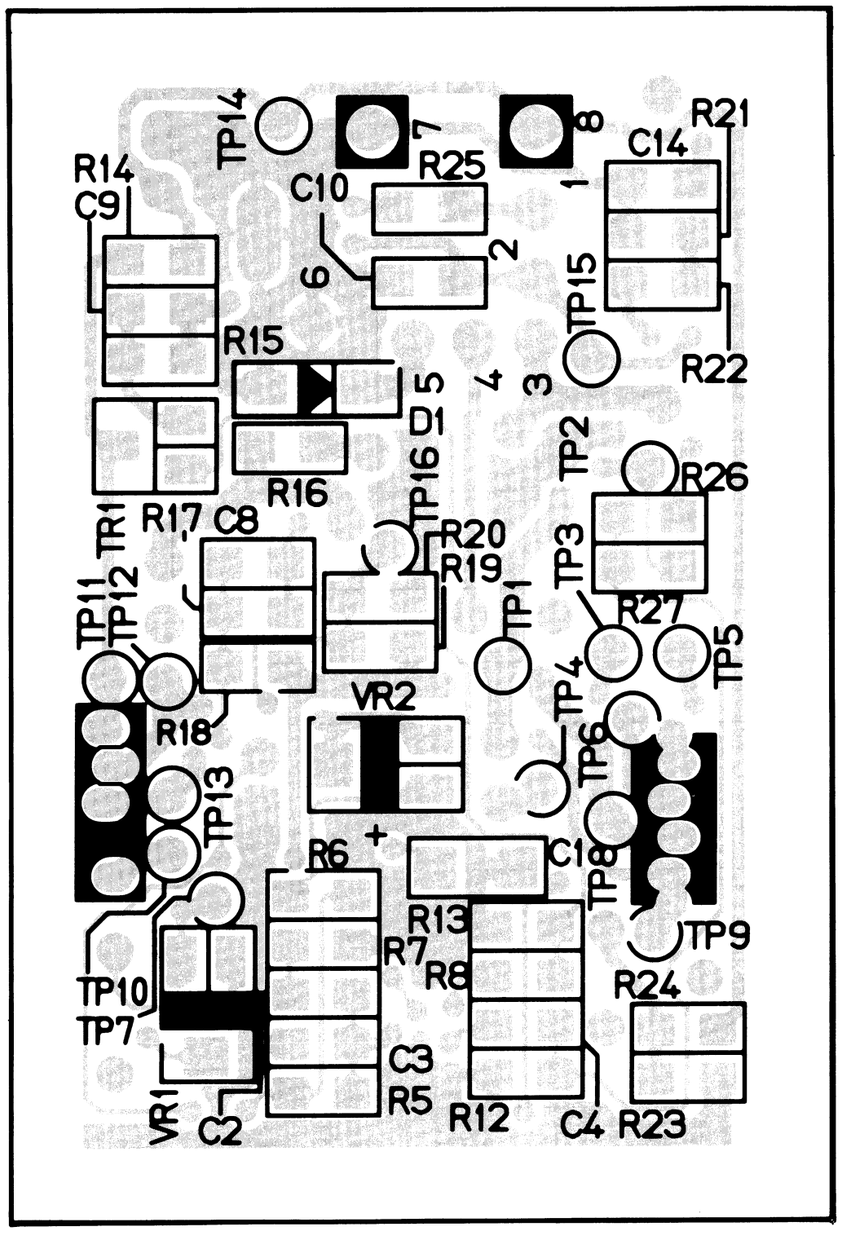


40 UPPER DRUM PWB

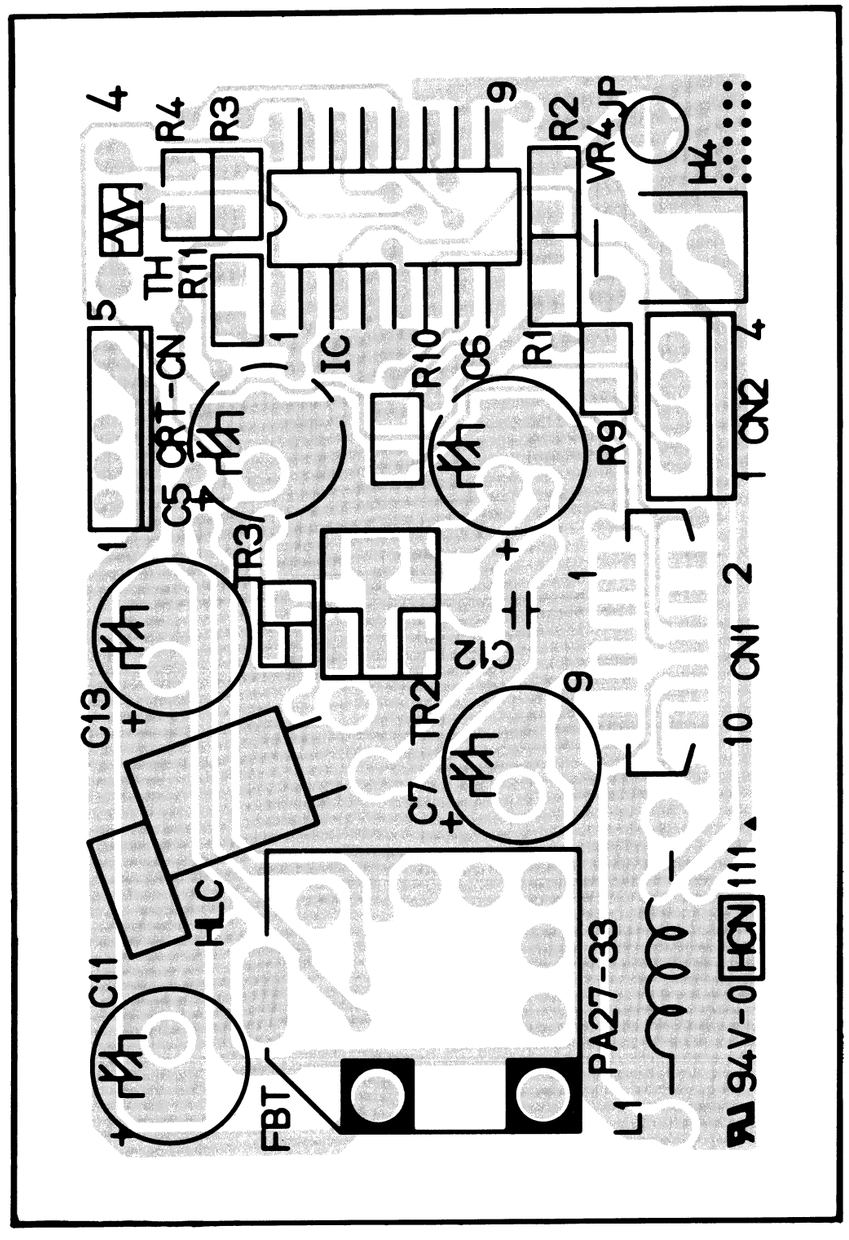
4.16 ELECTRONIC VIEWFINDER SCHEMATIC DIAGRAM [for GR-AX400/200]



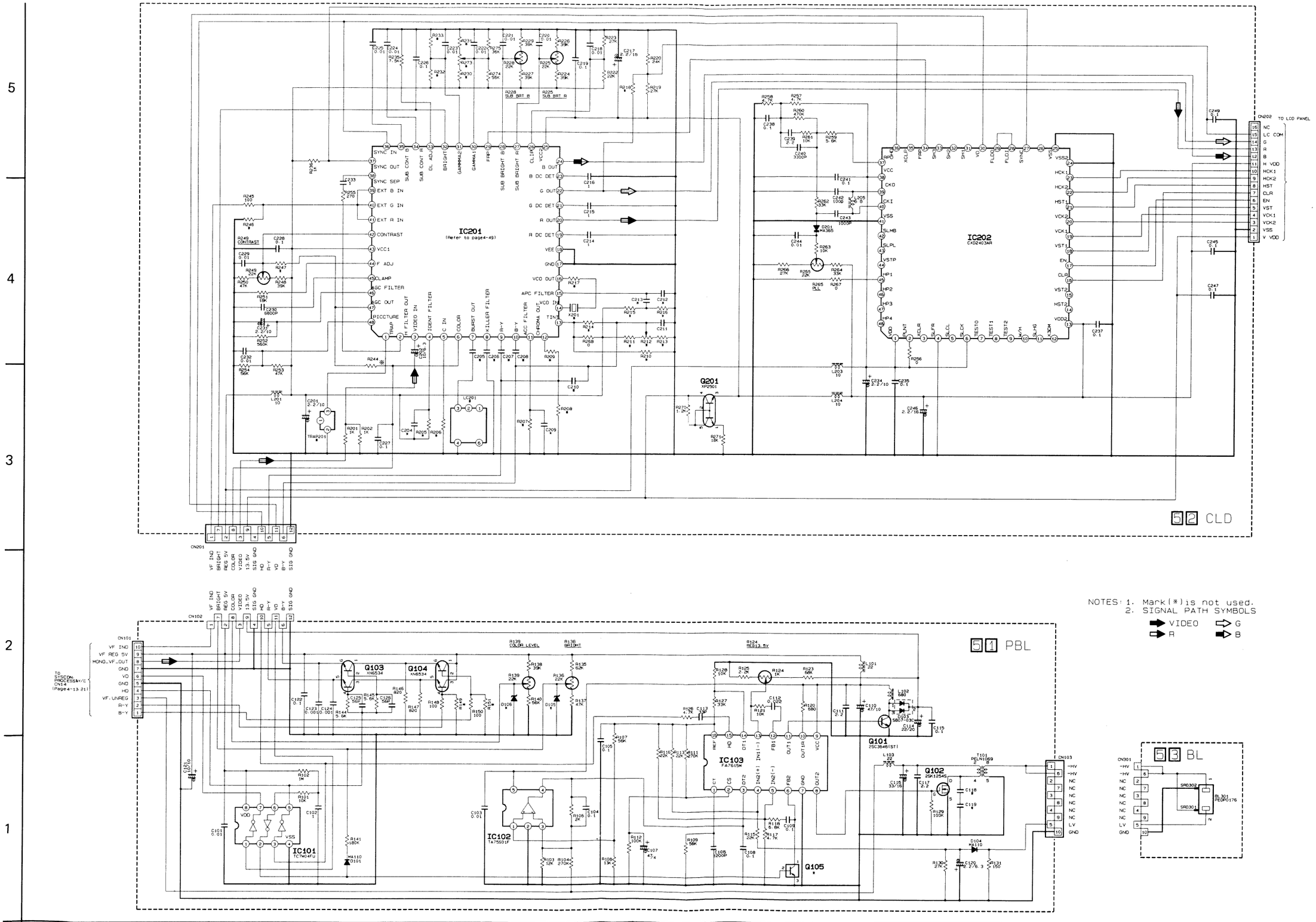
FOIL SIDE (B)



COMPONENT SIDE (A)



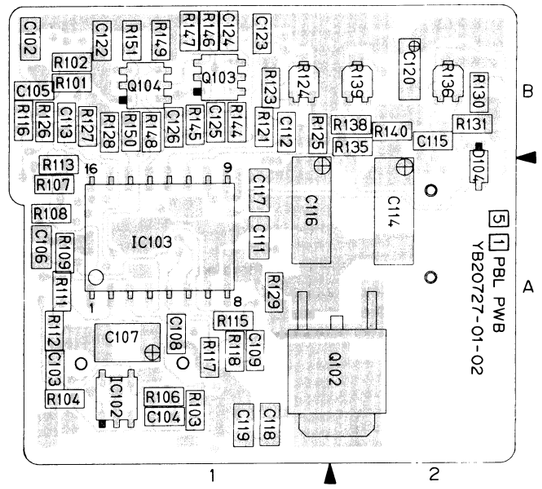
4.18 ELECTRONIC VIEWFINDER SCHEMATIC DIAGRAM [for GR-AX350]



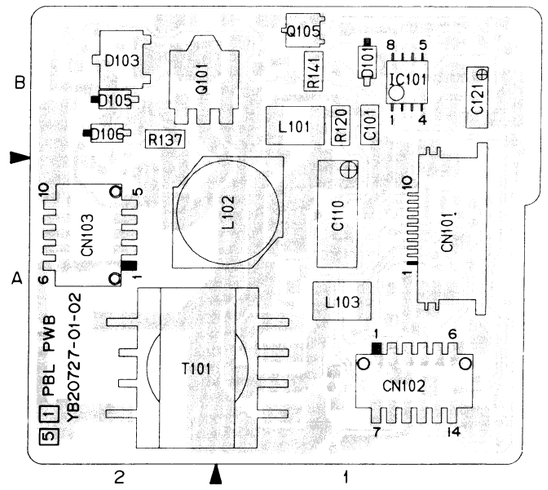
4.19 ELECTRONIC VIEWFINDER CIRCUIT BOARD [for GR-AX350]

– PBL –

FOIL SIDE (B)

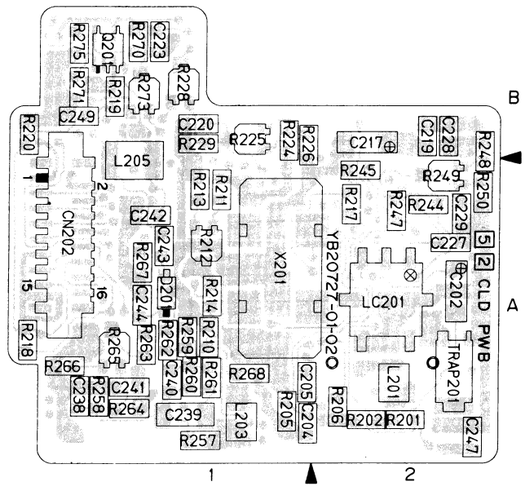


COMPONENT SIDE (A)

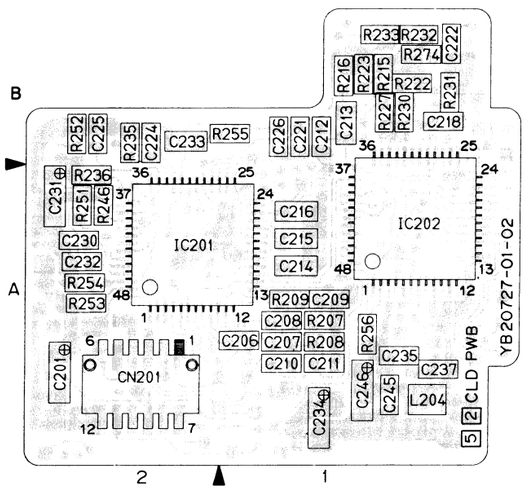


– CLD –

FOIL SIDE (B)

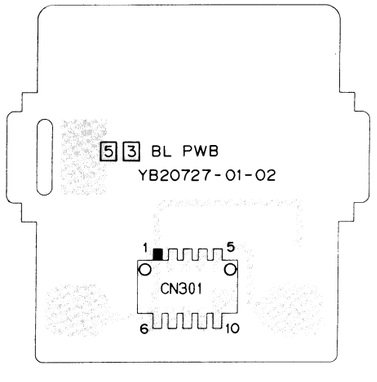


COMPONENT SIDE (A)

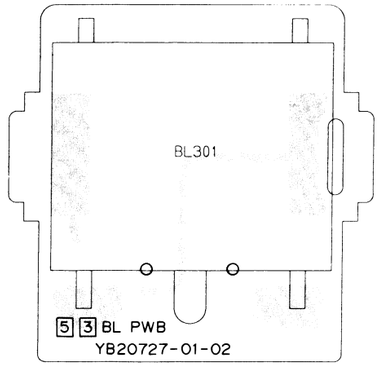


– BL –

FOIL SIDE (B)



COMPONENT SIDE (A)



PARTS LOCATION GUIDE <PBL BOARD>

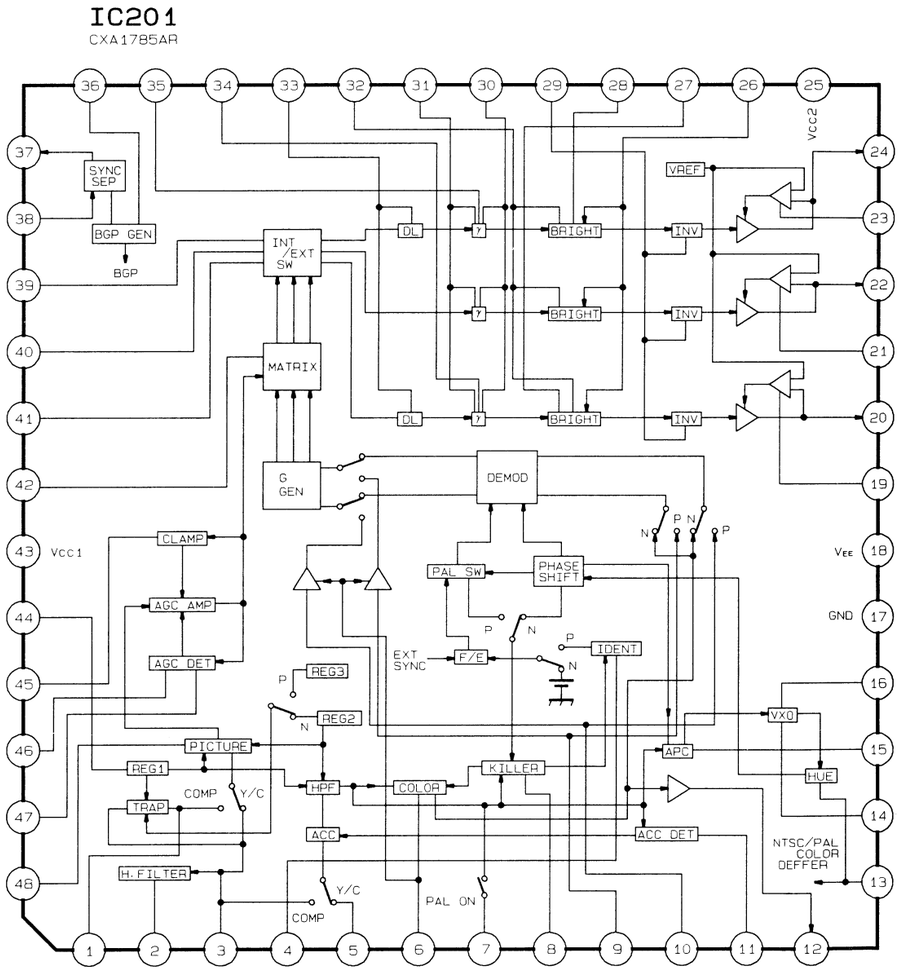
REF.No.	LOCATION
IC	
IC101	A-1B
IC102	B-1A
IC103	B-1A
TRANSISTOR	
Q101	A-2B
Q102	B-2A
Q103	B-1B
Q104	B-1B
Q105	A-1B
DIODE	
D101	A-1B
D103	A-2B
D104	B-2A
D105	A-2B
D106	A-2B
RESISTOR	
R101	B-1B
R102	B-1B
R103	B-1A
R104	B-1A
R106	B-1A
R107	B-1A
R108	B-1A
R109	B-1A
R111	B-1A
R112	B-1A
R113	B-1A
R115	B-1A
R116	B-1B
R117	B-1A
R118	B-1A
R120	A-1B
R121	B-1B
R123	B-1B
R124	B-1B
R125	B-1B
R126	B-1B
R127	B-1B
R128	B-1B
R129	B-1A
R130	B-2B
R131	B-2B
R135	B-2B
R136	B-2B
R137	A-2B
R138	B-2B
R139	B-2B
R140	B-2B
R141	A-1B
R144	B-1B
R145	B-1B
R146	B-1B
R147	B-1B
R148	B-1B
R149	B-1B
R150	B-1B
R151	B-1B
CAPACITOR	
C101	A-1B
C102	B-1B
C103	B-1A
C104	B-1A
C105	B-1B
C106	B-1A
C107	B-1A
C108	B-1A
C109	B-1A
C110	A-1A
C111	B-1A
C112	B-1B
C113	B-1B
C114	B-2A
C115	B-2B
C116	B-1A
C117	B-1A
C118	B-1A
C119	B-1A
C120	B-2B
C121	A-1B
C122	B-1B
C123	B-1B
C124	B-1B
C125	B-1B
C126	B-1B
COIL	
L101	A-1B
L102	A-1A
L103	A-1A
SW TRANS	
T101	A-2A
CONNECTOR	
CN101	A-1A
CN102	A-1A
CN103	A-2A

PARTS LOCATION GUIDE <CLD BOARD>

REF.No.	LOCATION
IC	
IC201	A-2A
IC202	A-1A
TRANSISTOR	
Q201	B-1B
DIODE	
D201	B-1A
RESISTOR	
R201	B-2A
R202	B-2A
R205	B-1A
R206	B-2A
R207	A-1A
R208	A-1A
R209	A-1A
R210	B-1A
R211	B-1A
R212	B-1A
R213	B-1A
R214	B-1A
R215	A-1B
R216	A-1B
R217	B-2A
R218	B-1A
R219	B-1B
R220	B-1B
R222	A-1B
R223	A-1B
R224	B-1B
R225	B-1B
R226	B-1B
R227	A-1B
R228	B-1B
R229	B-1B
R230	A-1B
R231	A-1B
R232	A-1B
R233	A-1B
R235	A-2B
R236	A-2A
R244	B-2A
R245	B-2A
R246	A-2A
R247	B-2A
R248	B-2B
R249	B-2A
R250	B-2A
R251	A-2A
R252	A-2B
R253	A-2A
R254	A-2A
R255	A-1B
R256	A-1A
R257	B-1A
R258	B-1A
R259	B-1A
R260	B-1A
R261	B-1A
R262	B-1A
R263	B-1A
R264	B-1A
R265	B-1A
R266	B-1A
R267	B-1A
R268	B-1A
R270	B-1B
R271	B-1B
R273	B-1B
R274	A-1B
R275	B-1B
CAPACITOR	
C201	A-2A
C202	B-2A
C204	B-1A
C205	B-1A
C206	A-1A
C207	A-1A
C208	A-1A
C209	A-1A
C210	A-1A
C211	A-1A
C212	A-1B
C213	A-1B
C214	A-1A
C215	A-1A
C216	A-1A
C217	B-2B
C218	A-1B
C219	B-2B
C220	B-1B
C221	A-1B
C222	A-1B
C223	B-1B
C224	A-2B
C225	A-2B
C226	A-1B
C227	B-2A
C228	B-2B
C229	B-2A
C230	A-2A
C231	A-2A
C232	A-2A
C233	A-2B
C234	A-1A
C235	A-1A
C237	A-1A
C238	B-1A
C239	B-1A
C240	B-1A
C241	B-1A
C242	B-1A
C243	B-1A
C244	B-1A
C245	A-1A
C246	A-1A
C247	B-2A
C249	B-1B
COIL	
L201	B-2A
L203	B-1A
L204	A-1A
L205	B-1B
TRAP	
TRAP201	B-2A
RESONATOR	
LC201	B-2A
CONNECTOR	
CN201	A-2A
CN202	B-1A

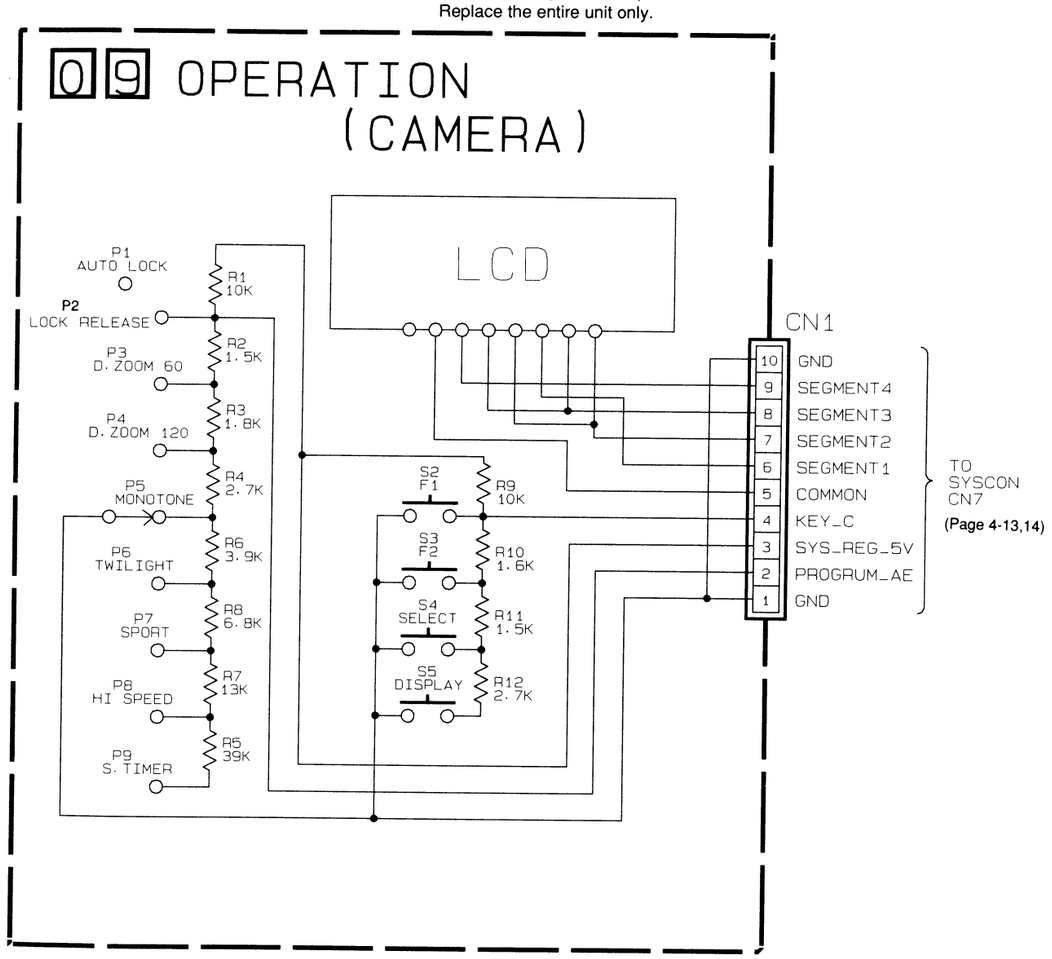
4.20 IC BLOCK DIAGRAM

–CLD–



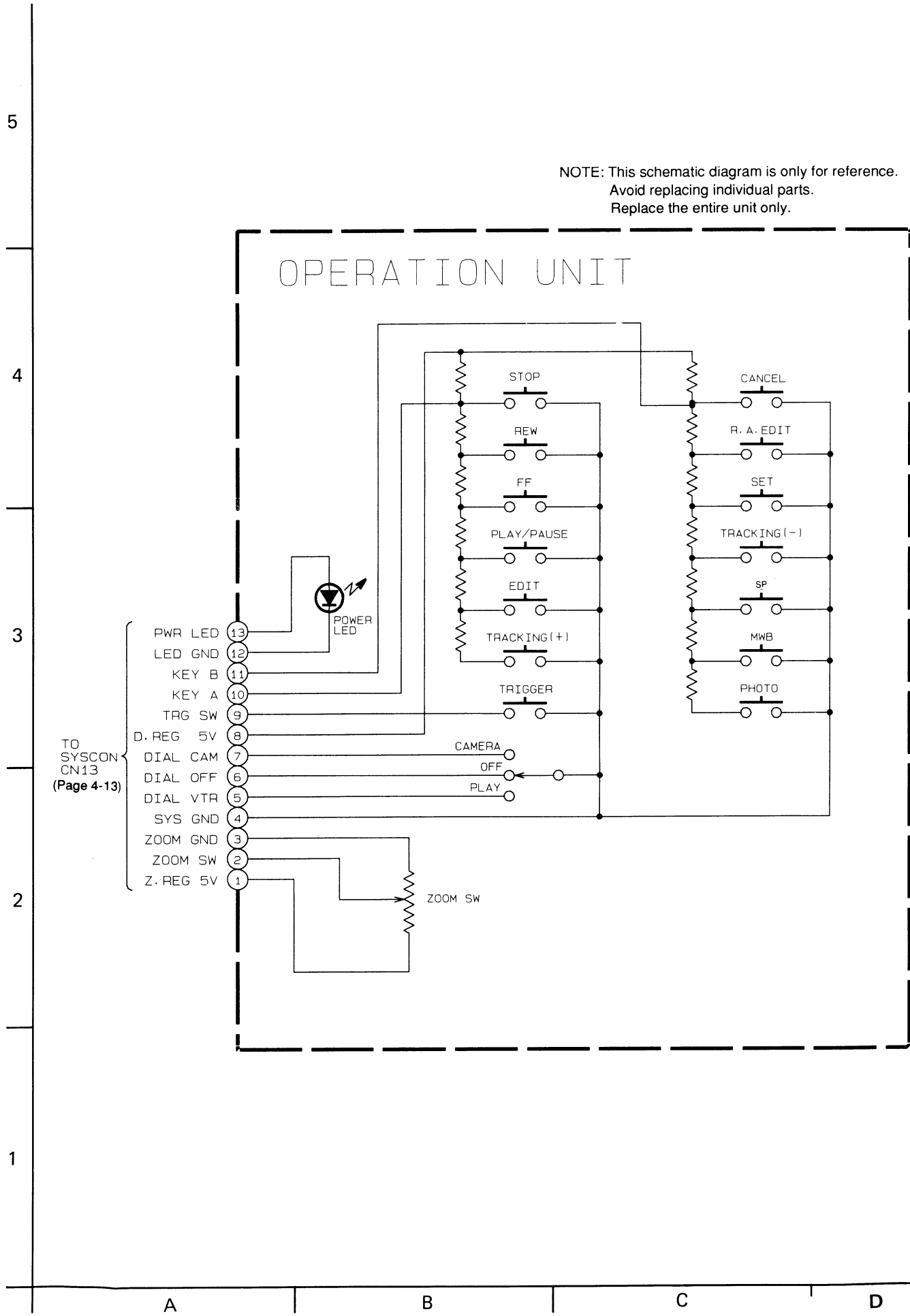
4.21 OPERATION (CAMERA) SCHEMATIC DIAGRAM

NOTE: This schematic diagram is only for reference.
Avoid replacing individual parts.
Replace the entire unit only.

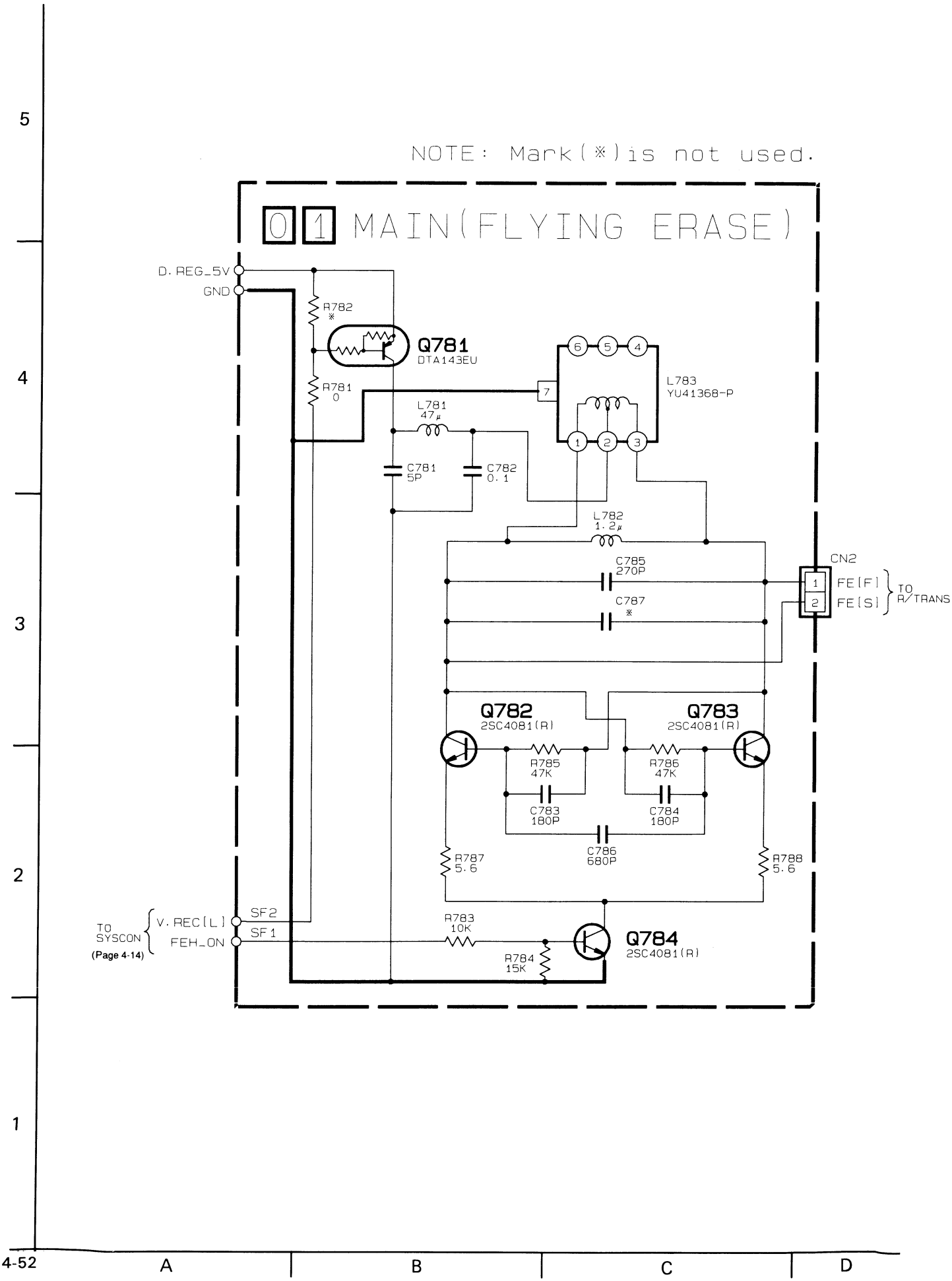


4.22 OPERATION UNIT SCHEMATIC DIAGRAM

NOTE: This schematic diagram is only for reference.
Avoid replacing individual parts.
Replace the entire unit only.



4.23 FLYING ERASE SCHEMATIC DIAGRAM



4.24 VOLTAGE CHARTS

〈SYSCON〉

MODE /PIN	REC	PLAY
IC1		
1	5.1	5.1
2	1.7	1.7
3	2.1	2.1
4	5.1	5.2
5	5.1	5.1
6	0	0
7	5.1	-
8	0	0
9	2.5	2.6
10	3.1	3.1
11	4.9	5.0
12	2.6	2.7
13	0	0
14	5.1	5.1
15	0	5.1
16	5.1	5.1
17	5.1	5.1
18	0	0
19	0	5.1
20	0.6	0
21	0.6	0.6
22	3.1	2.7
23	0	5.0
24	0.7	0.7
25	2.6	2.6
26	2.6	2.6
27	0.5	0.5
28	2.6	2.6
29	2.6	2.6
30	0	5.1
31	0	5.1
32	0	0
33	0	0
34	0	0
35	0	5.1
36	5.1	0
37	5.1	0
38	5.1	5.2
39	5.1	0
40	0	0
41	0	0
42	0	0
43	5.1	5.1
44	0	0
45	5.1	5.1
46	5.1	5.1
47	0	0
48	0	0
49	5.1	5.1
50	-	-
51	-	-
52	0	0
53	0	0
54	1.0	1.0
55	1.0	1.0
56	5.0	5.0
57	4.9	5.0
58	0	0
59	0	0
60	2.6	2.6
61	0	0
62	5.0	5.0
63	5.0	5.0
64	5.0	5.0
65	5.0	5.0
66	0	5.1
67	5.1	5.1
68	5.1	0
69	3.8	3.9
70	0	5.1
71	0	0
72	0	0
73	0	5.2
74	0	0
75	5.1	0
76	0	0
77	0	0
78	4.2	4.2
79	5.1	5.1
80	5.0	5.0
81	0	0
82	2.9	1.0

MODE /PIN	REC	PLAY
83	0.7	0
84	5.0	5.1
85	3.2	3.2
86	0.6	0.6
87	5.1	5.1
88	5.0	5.0
89	0	0
90	2.5	2.6
91	2.5	2.6
92	2.5	2.5
93	0	0
94	2.7	2.6
95	2.3	2.1
96	2.5	2.6
97	2.5	2.6
98	2.5	2.6
99	0	0
100	2.6	0
101	2.1	0
102	0	0
103	0	0
104	5.1	5.2
105	5.0	3.1
106	0	0
107	2.5	0
108	-	-
109	2.6	2.6
110	4.6	0
111	0.7	0.7
112	0	0
113	3.8	3.8
114	2.7	2.7
115	2.4	2.5
116	5.0	5.0
117	3.7	3.8
118	5.0	5.0
119	5.0	5.0
120	5.0	5.0
121	4.9	4.9
122	5.0	5.0
123	0.6	0.5
124	2.6	2.6
125	0.4	0.4
126	0	0
127	0	0
128	0	0
IC2		
1	5.0	5.0
2	3.8	3.8
3	4.2	4.2
4	4.9	5.0
5	5.0	5.0
6	2.6	2.6
7	2.0	2.0
8	2.0	2.0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	4.9	5.0
20	4.4	4.5
IC4		
1	0	0
2	5.1	5.1
3	0.6	0.6
4	5.1	5.1
5	0.7	0.6
6	5.1	5.1
7	0	0
8	-	-
9	-	-
10	-	-
11	-	-
12	0	5.2
13	5.1	0
14	5.1	5.1

MODE /PIN	REC	PLAY
IC5		
1	0	0
2	0	0
3	0.5	0.5
4	-	-
5	5.1	5.1
6	5.1	5.1
7	7.3	7.3
8	5.1	5.1
IC6		
1	0.7	0
2	7.3	7.3
3	4.9	5.0
4	0	0
5	0	0
6	4.1	4.1
7	0.7	0
8	0	0
Q1		
E	5.1	5.1
C	0	0
B	5.1	5.1
Q2		
E	0	0
C	0	0.6
B	5.1	0
Q3		
E	5.0	5.0
C	5.0	4.9
B	0	0
Q4		
E	5.0	5.0
C	5.0	0.7
B	4.3	5.0
Q5		
E	4.9	0
C	4.9	0
B	0	0
Q6		
E	0	0
C	6.6	6.5
B	0.6	0.6
Q7		
E	7.3	7.3
C	0	0.5
B	7.2	7.2
Q8		
E	0	0
C	7.3	7.3
B	0.6	0
Q9		
E	7.3	7.3
C	1.6	0
B	7.2	7.3
Q201		
E	0	0
C	0	0
B	0	5.1
Q202		
E	0	0
C	0	0.7
B	0.8	0
Q203		
E	5.0	5.0
C	4.9	0.6
B	0	5.1

〈MDA〉

MODE /PIN	REC	PLAY
IC301		
1	5.0	5.0
2	0	0
3	2.5	2.5
4	2.6	2.6
5	2.5	2.5
6	2.0	2.0
7	1.3	1.3
8	4.4	4.3
9	1.2	1.3
10	5.1	5.1
11	0.8	0.7
12	1.5	1.6

MODE /PIN	REC	PLAY
13	2.4	2.4
14	1.8	1.7
15	0	0
16	1.7	1.7
17	7.3	7.3
18	1.7	1.7
19	2.2	2.1
20	2.2	2.2
21	0.8	0.8
22	0.8	0.6
23	3.7	3.6
24	3.6	3.6
25	4.4	4.4
26	2.5	2.5
27	2.6	2.5
28	2.5	2.5
29	0	0
30	0	0
IC351		
1	0	0
2	2.4	2.4
3	2.4	2.3
4	1.4	1.4
5	0	0
6	1.7	1.7
7	1.2	1.2
8	0.5	0.5
9	4.0	3.9
10	0.7	0.7
11	0	0
12	0	0
13	0	0
14	5.0	5.0
15	2.5	2.5
16	2.6	2.5
17	2.6	2.5
18	4.2	4.2
19	0	0
20	2.5	2.5
21	2.5	2.5
22	2.5	2.5
23	2.5	2.5
24	2.5	2.5
25	2.5	2.5
26	1.9	1.8
27	1.9	1.7
28	1.9	1.8
29	0.9	0.9
30	0.9	0.8
31	0.9	0.9
32	0	0
Q351		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0.9	0.9
9	0.9	1.8
10	1.0	0.6
11	1.9	1.8
12	0.9	0.9
13	1.9	1.8
14	2.4	0

〈AUDIO〉

MODE /PIN	REC	PLAY
IC401		
1	1.8	1.8
2	2.4	2.4
3	2.4	2.4
4	2.4	2.4
5	2.4	2.4
6	2.4	2.4
7	0	0
8	1.7	1.6
9	0	0
10	2.4	2.4
11	0.7	0
12	0	5.1

MODE /PIN	REC	PLAY
13	2.4	2.3
14	4.2	0.4
15	2.4	2.4
16	0	0
17	0	0
18	0	0
19	1.6	1.7
20	0	0
21	1.8	1.8
22	4.7	4.7
23	1.9	1.7
24	4.7	4.7
IC402		
1	2.4	2.4
2	2.4	2.4
3	2.4	2.3
4	0	0
5	1.8	1.8
6	1.8	1.8
7	1.8	1.8
8	4.7	4.7
Q401		
E	4.5	5.1
C	4.2	0.4
B	0	5.1
Q402		
E	5.0	5.0
C	4.4	5.1
B	0	5.1
Q403		
1	-16.6	0.8
2	-10.3	0
3	-16.3	0.8
4	0	0
5	0	0
Q404		
E	4.7	4.7
C	-16.4	4.6
B	4.7	0
Q405		
E	0	0
C	4.7	0
B	0	5.1
Q406		
E	0	0
C	0	0
B	3.6	3.6
Q407		
E	0	0
C	3.6	3.6
B	0	0
Q408		
E	0	0
C	4.0	0.4
B	0.4	0.4

〈PROCESS&Y/C〉

MODE /PIN	REC	PLAY
IC501		
1	1.9	0
2	2.7	1.2
3	2.0	4.0
4	3.1	3.5
5	2.0	2.0
6	2.3	4.0
7	0	0
8	2.0	2.2
9	2.8	2.9
10	1.9	1.9
11	1.9	1.9
12	4.8	4.9
13	2.6	2.5
14	3.0	0
15	2.0	0
16	2.6	1.7
17	1.7	0.5
18	2.2	2.1
19	2.2	2.2
20	4.9	4.9
21	2.0	2.6
22	2.3	2.1
23	1.9	1.6

MODE /PIN	REC	PLAY
24	0	0
25	0.6	0.5
26	2.3	2.3
27	2.3	2.3
28	2.1	2.3
29	2.3	2.2
30	4.1	0.8
31	2.3	2.4
32	0.9	2.9
33	0	1.3
34	2.3	1.8
35	2.3	1.9
36	2.6	2.4
37	2.6	2.8
38	2.3	1.8
39	3.3	3.9
40	4.9	4.9
41	1.0	1.0
42	2.7	2.4
43	0	0
44	5.1	5.1
45	0	0
46	0.7	0.6
47	2.0	2.5
48	1.4	2.4
49	0	0
50	2.4	2.3
51	5.0	5.0
52	0	0
53	0	0
54	2.5	2.5
55	0	0
56	3.6	3.1
57	2.9	2.7
58	3.9	4.9
59	2.3	2.9
60	3.1	3.1
61	2.4	2.4
62	3.1	3.2
63	1.0	1.0
64	2.9	3.1
65	1.9	1.7
66	2.9	3.2
67	1.0	2.5
68	0	2.6
69	3.4	3.5
70	2.1	2.0
71	2.0	2.0
72	4.9	4.9
73	2.1	2.0
74	2.8	2.8
75	2.5	2.0
76	0	0
77	2.8	2.8
78	3.5	3.5
79	2.5	2.6
80	2.4	2.6
81	1.8	1.9
82	1.9	1.9
83	0	0
84	0	0
85	0	0
86	3.5	3.5
87	2.9	1.0
88	3.2	1.0
89	2.1	1.0
90	2.6	1.0
91	2.5	0
92	0.7	0
93	4.8	4.9
94	2.2	3.2
95	1.9	1.9
96	2.2	3.5
97	3.2	0
98	3.1	0
99	1.9	0
100	1.9	0
101	2.5	1.5
102	2.5	1.3
103	1.9	0
104	1.9	0.7
105	2.0	0.8
106	2.0	0.6

MODE /PIN	REC	PLAY
107	1.7	1.7
108	1.7	1.7
109	3.4	0.6
110	2.4	3.4
111	2.3	3.4
112	3.4	0
113	1.2	0.5
114	1.2	0
115	0	0
116	2.0	0.5
117	1.8	1.9
118	2.6	2.7
119	2.3	1.9
120	2.3	0.6
121	2.4	2.4
122	2.4	2.4
123	1.9	0.7
124	2.0	0.7
125	3.4	0.5
126	2.0	2.3
127	3.1	0
128	2.0	1.3
IC502		
1	4.1	2.3
2	0	0
3	4.2	2.2
4	3.4	3.5
5	3.4	2.9
6	0	0
7	1.9	2.0
8	4.1	4.1
9	2.8	2.7
10	0	3.0
11	1.0	2.5
12	0.9	2.5
13	3.5	3.5
14	3.3	2.9
15	4.9	4.9
16	3.6	3.6
IC503		
1	2.2	0
2	0	0
3	4.8	0
4	2.8	2.9
5	0	0
6	2.8	2.9
7	1.7	1.5
8	2.3	2.4
9	4.8	4.9
10	0	0
11	2.1	2.3
12	2.5	2.5
13	2.8	2.9
14	5.1	0
15	2.9	2.9
16	4.8	4.9
17	0	0
18	-2.6	-2.6
19	0	2.6
20	2.2	2.6
Q503		
E	2.5	2.6
C	4.9	4.9
B	3.2	3.2
Q505		
E	2.9	3.0
C	0	0
B	2.4	2.5
Q506		
E	2.9	2.9
C	0	0
B	2.3	2.3
Q507		
E	0	0
C	0	0
B	0	0
Q509		
E	3.0	3.0
C	4.9	4.9
B	3.6	3.6
Q701		
E	3.5	1.6
C	4.9	4.9

MODE /PIN	REC	PLAY
B	4.2	2.2
Q704		
E	3.6	1.4
C	4.9	5.0
B	4.3	2.0
Q706		
E	0	0
C	0	3.0
B	5.1	0
Q810		
E	1.8	0
C	0	0
B	1.2	0
Q811		
E	1.8	0.6
C	0	0
B	1.2	0
Q812		
E	1.6	0.7
C	0	0
B	0.9	0

〈PRE/REC〉

MODE /PIN	REC	PLAY
IC601	-	-
Q601	-	-
Q602	-	-
Q603	-	-
Q604	-	-
Q605		
E	4.3	2.5
C	0	0
B	3.7	1.9
Q606	-	-

〈FLYING ERASE〉

MODE /PIN	REC	PLAY
Q781		
E	4.9	5.0
C	4.7	0
B	0	5.1
Q782		
E	0	0.7
C	4.8	0
B	0.9	0
Q783		
E	0	0.6
C	4.8	0
B	0.9	0
Q784		
E	0	0
C	0	0.7
B	0	0

〈AF/CPU〉

MODE /PIN	REC	PLAY
IC801		
1	1.8	1.3
2	1.8	1.3
3	4.9	0.6
4	3.3	1.6
5	1.6	1.6
6	0	0
7	0	0
8	0	0
9	2.6	0
10	2.6	0
11	2.6	0
12	0	0
13	0	0
14	0	0
15	1.8	1.6
16	4.6	1.3
IC802		
1	1.9	1.3
2	1.8	1.3
3	1.8	1.2
4	4.9	0.6
5	1.8	1.0
6	1.8	1.8

MODE /PIN	REC	PLAY
7	1.6	1.3
8	1.8	1.6
9	1.8	1.8
10	1.8	0.4
11	0	0
12	1.8	0.4
13	1.8	1.7
14	1.6	1.6
IC803		
1	1.8	0.4
2	1.6	0.4
3	1.8	1.0
4	0	0
5	1.6	1.0
6	1.8	0.4
7	1.8	0
8	4.9	0.7
IC804		
1	1.9	0.7
2	2.6	0.7
3	2.6	0.7
4	5.0	0.7
5	2.6	0.7
6	2.6	0.7
7	1.8	0.7
8	2.4	0.7
9	1.9	0.7
10	1.8	1.9
11	0	0
12	1.9	1.8
13	1.7	0.7
14	2.0	0.5
IC805		
1	2.0	0.7
2	2.0	0.4
3	1.9	0.6
4	5.0	0.7
5	2.2	0.7
6	2.3	1.7
7	2.7	1.2
8	2.4	0.7
9	2.4	0.7
10	2.3	0.6
11	0	0
12	3.3	0
13	3.3	0
14	3.3	0
IC901		
1	1.7	1.3
2	1.9	1.6
3	3.3	1.6
4	0	0
5	3.6	0.5
6	3.1	0
7	5.0	0.7
8	5.1	4.7
9	0.6	0.5
10	5.1	5.1
11	-	-
12	1.0	0
13	5.1	5.1
14	0	0
15	3.2	3.2
16	0.6	0.6
17	0	0
18	5.0	5.0
19	0	0
20	0	0
21	0	0
22	5.1	0
23	0	0
24	0	0
25	2.6	0
26	0	0
27	2.5	0.6
28	0	0
29	0	0.4
30	0	0.4
31	0	0.6
32	0	0
33	0	0
34	2.4	0.6
35	5.1	4.9

MODE /PIN	REC	PLAY
36	3.9	0.7
37	0.7	0.5
38	0.7	0.6
39	0.7	0.4
40	5.1	0
41	0	0
42	0	0.4
43	0	0.4
44	0	0.4
45	2.7	0.6
46	5.1	0.4
47	0.5	0
48	0.6	0
49	5.1	0
50	5.1	0
51	0.6	0.5
52	2.7	0
53	0	0
54	1.3	0
55	1.3	0.4
56	5.1	0.4
57	0	0
58	2.5	0.6
59	0	0
60	5.1	5.1
61	2.5	2.5
62	5.1	5.1
63	1.8	0.7
64	0	0
65	0.5	0
66	0	0
67	0	0
68	5.1	5.0
69	3.4	3.4
70	2.9	2.9
71	0	0
72	5.1	5.0
73	0	0
74	5.1	5.1
75	5.0	0.7
76	1.2	0
77	4.7	0
78	1.1	1.2
79	4.0	0.6
80	0	0
IC902		
1	2.8	0
2	3.4	0.5
3	2.9	0
4	2.5	0
5	2.3	0
6	1.7	0
7	2.3	0
8	4.5	0
9	3.4	0.5
10	2.5	0.6
11	0	0
12	2.5	0.7
13	0	0
14	1.3	0.7
15	3.9	0.6
16	4.8	0.6
17	0	1.3
18	0.7	0
19	3.1	0
20	3.2	0
21	1.3	0.4
22	0	0
23	0	0
24	2.9	0
25	1.2	0
26	0.7	0
27	2.7	0
28	0.8	0.7
29	2.5	0
30	0	0
31	0	0.4
32	2.7	0.4
33	2.6	0
34	3.3	0.7
35	3.0	0.6
36	1.7	0
37	3.3	0.6

MODE /PIN	REC	PLAY
38	3.3	0
39	2.8	0
40	3.3	0
41	2.8	0
42	3.3	0
43	2.8	0
44	3.3	0.6
IC903		
1	5.1	5.1
2	0.7	0.7
3	5.1	5.1
4	0	0
5	0	0
6	4.3	4.2
7	5.1	5.1
8	5.1	5.1
IC904		
1	0	0
2	7.3	7.3
3	5.1	5.1
IC905		
1	2.5	0.4
2	2.5	0.5
3	2.5	0.4
4	5.0	0.7
5	2.0	2.2
6	2.0	1.5
7	1.0	1.2
8	3.8	0
9	0	0
10	0	0
11	0	0
12	2.5	0.6
13	2.5	0.6
14	1.8	0.5
IC906		
1	4.8	0
2	4.8	0.7
3	0	0.4
4	5.0	0
5	0	0.4
6	0	0
7	0	0
8	0.7	0.7
9	1.4	0.4
10	4.8	0.4
11	0	0
12	4.8	0.4
13	4.8	0.4
14	4.9	0.7
IC907		
1	0	0.4
2	5.0	0.7
3	4.9	0.7
4	0	0.4
5	4.8	0
6	0	0
7	4.9	0.7
8	7.3	7.3
9	0.6	0.6
10	0	0
11	0	0
12	0.6	0.7
13	0	0
14	0	0
15	0	0
16	0	0
17	7.3	7.3
18	0	0
19	0	0
20	5.1	0
21	5.1	0
22	2.0	0.7
23	0	0.4
24	4.9	0.7
IC908		
1	0	0.4
2	5.0	0.7
3	5.0	0.7
4	0	0.4
5	4.8	0
6	0	0
7	0	0.7

MODE /PIN	REC	PLAY
8	0	7.4
9	0.5	0.5
10	0	0
11	0	0
12	0.6	0.5
13	0	0
14	0	0
15	0	0
16	0	0
17	7.3	7.4
18	0	0
19	0	0
20	5.1	0
21	5.1	0
22	2.1	0.5
23	0	0.4
24	5.0	0.7
IC909		
1	0	0
2	0	0
3	0	0
4	5.1	5.1
5	5.1	5.1
IC910		
1	3.5	0
2	2.4	0
3	2.4	0.5
4	0	0
5	2.4	0.4
6	2.4	0
7	2.4	0
8	4.9	0.7
IC911		
1	2.2	0.7
2	3.3	0
3	0	0.4
4	0	0
5	2.4	0
6	2.4	0
7	0	0.4
8	5.0	0.7
Q802		
E	1.9	0.7
C	2.6	0.7
B	0.5	0
Q803		
1	0	1.4
2	1.9	1.9
3	0	1.4
4	1.9	1.0
5	1.9	1.0
Q804		
E	1.8	0.7
C	2.6	0.7
B	0	0
Q805		
1	0	1.4
2	1.9	1.9
3	0	1.4
4	1.9	1.0
5	1.9	1.0
Q901		
E	0	0
C	4.7	4.7
B	0	0
Q902		
E	4.9	0.7
C	4.7	0
B	4.8	0.7
Q904		
1	0	0
2	0	0
3	0	0
4	4.3	0
5	4.3	0
Q905		
1	1.7	0.7
2	1.1	0.5
3	3.7	0.8
4	4.9	0.7
5	3.1	0.7
6	0	0

MODE /PIN	REC	PLAY
Q906		
1	3.0	0.6
2	2.3	0
3	2.9	0.6
4	4.9	0.7
5	2.4	0
6	0	0
Q907		
1	4.2	0.7
2	3.6	0
3	4.2	0.6
4	4.9	0.6
5	3.5	0
6	0	0

<REAR>

MODE /PIN	REC	PLAY
IC1		
1	4.7	4.9
2	7.1	6.5
3	7.0	6.9
4	0	0
5	1.5	1.6
6	1.3	1.3
7	-	-
8	5.0	5.0
9	0	0
10	1.9	1.9
11	0	0
12	0	0
13	7.2	7.3
14	0	0
15	1.8	1.9
16	1.3	1.3
17	1.6	1.7
18	4.5	7.3
19	2.6	2.5
20	6.9	7.3
21	7.2	7.3
22	5.0	0
23	0	0
24	1.3	0
25	1.3	1.3
26	1.3	0
27	1.6	2.3
28	1.9	0
29	7.2	6.8
30	0	0
31	2.5	2.6
32	0	0
33	2.6	0
34	5.6	7.3
35	7.1	6.8
36	7.2	7.3
37	6.8	6.8
38	0	0
39	7.3	7.3
40	6.9	7.3
41	2.4	0
42	0	0
43	0	0.7
44	7.2	6.8
45	7.3	7.3
46	6.4	6.5
47	2.5	2.4
48	6.4	6.5
IC2	-	-
Q1		
E	7.3	7.3
C	7.2	7.3
B	0	0
Q3		
E	7.2	7.3
C	5.3	5.4
B	6.6	6.8
Q5		
E	0	0
C	0	5.0
B	5.0	0
Q6		
1	7.3	7.3
2	6.7	6.8

MODE /PIN	REC	PLAY
3	0	0
4	2.6	2.5
Q7		
E	7.3	7.3
C	0.4	0
B	6.9	7.3
Q8		
E	5.0	0.7
C	5.0	5.0
B	5.0	0
Q9		
E	0	0
C	0	0
B	4.5	4.5
Q201		
E	7.3	7.3
C	0	0
B	7.3	7.3
Q202		
E	0	0
C	0	7.3
B	0	0
Q203		
E	7.3	7.3
C	7.2	7.3
B	6.5	6.6
Q204		
E	0	0
C	0	0
B	4.5	4.5
Q205		
E	0	0
C	0	0
B	0	0

<CCD>

MODE /PIN	EE
IC201	
1	0
2	-7.7
3	0.8
4	0
5	0
6	4.9
7	0
8	4.8
9	0
10	4.8
11	0
12	0
13	4.8
14	4.6
15	0
16	15.0
17	0
18	-7.3
19	1.1
20	15.0
IC202	
1	4.8
2	0
3	2.4
4	1.9
5	2.2
6	2.2
7	0
8	4.9
9	0
10	0
11	0
12	4.6
13	4.7
14	4.9
15	4.9
16	4.9
17	0
18	0
19	1.0
20	0
21	0
22	2.4
23	0
24	4.9
25	0
26	0.5
27	0
28	3.6
29	0.9
30	0
31	0.6
32	4.9
33	1.8
34	0
35	0
36	0
37	1.1
38	4.4
39	0
40	0
41	4.8
42	2.2
43	2.1
44	4.8
45	4.8
46	0
47	0
48	2.9
49	2.4
50	0
51	4.9
52	0
53	0
54	2.3
55	2.3
56	0
57	4.9
58	0.4
59	2.4
60	0
61	1.1

MODE /PIN	EE
62	1.1
63	1.0
64	1.0
IC203	
1	1.8
2	0.4
3	2.7
4	4.9
5	1.2
6	1.2
7	0
8	1.8
CN201	
1	15.0
2	3.5
3	15.0
4	11.5
5	3.2
6	2.1
7	2.5
8	4.6
9	8.2
10	0
11	0.8
12	-7.3
13	-7.3
14	0
Q201	
E	0
C	4.9
B	1.7
Q202	
1	2.6
2	3.2
3	0
4	15.0
5	5.3
6	5.9
Q203	
E	10.8
C	14.9
B	11.4
Q204	
E	1.2
C	4.9
B	1.8
Q205	
E	1.8
C	4.8
B	2.3

<E.VF for GR-AX400/200>

MODE /PIN	EE
IC1	
1	0
2	4.9
3	2.4
4	0
5	1.9
6	0
7	0
8	4.5
9	4.4
10	0
11	1.9
12	4.5
13	2.8
14	1.8
15	1.8
16	3.1
Q1	
E	2.2
C	-15.2
B	1.7
Q2	
E	0
C	4.5
B	0
Q3	
E	0
C	0

MODE /PIN	EE
B	0.3

<E.VF for GR-AX350>

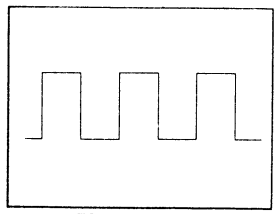
MODE /PIN	EE
IC101	
1	0
2	0
3	0
4	0
5	4.3
6	4.4
7	4.8
8	4.9
IC102	
1	0.5
2	0
3	0.4
4	0.5
5	4.8
IC103	
1	0.7
2	2.3
3	0.5
4	1.4
5	0.4
6	2.4
7	0
8	0
9	4.9
10	4.9
11	0
12	2.4
13	0
14	0.6
15	0
16	2.4
IC201	
1	2.3
2	4.2
3	2.4
4	0.6
5	2.7
6	2.7
7	4.3
8	0.7
9	2.1
10	2.1
11	1.1
12	4.0
13	4.7
14	4.7
15	1.8
16	4.6
17	0
18	0
19	2.4
20	6.0
21	2.4
22	6.1
23	2.5
24	6.1
25	12.0
26	2.6
27	2.3
28	2.3
29	2.4
30	1.9
31	2.3
32	2.2
33	1.2
34	2.3
35	2.3
36	0.5
37	0.5
38	2.4
39	0
40	0
41	0
42	2.5
43	4.7
44	1.3

MODE /PIN	EE
45	2.5
46	2.9
47	1.9
48	2.4
IC202	
1	4.8
2	0
3	4.8
4	0
5	4.8
6	4.8
7	0
8	0
9	0
10	4.8
11	4.8
12	4.8
13	3.7
14	0
15	0
16	0
17	3.8
18	0
19	1.9
20	1.9
21	0
22	2.3
23	1.1
24	0
25	0
26	0
27	0.5
28	2.4
29	2.4
30	0
31	1.4
32	1.4
33	1.4
34	2.4
35	4.7
36	0.4
37	0
38	4.9
39	2.5
40	2.5
41	0
42	0
43	4.9
44	4.9
45	4.9
46	0
47	0
48	4.9
Q101	
E	0
C	4.7
B	0
Q102	
S	0
D	6.7
G	0
Q103	
1	1.6
2	2.3
3	1.6
4	2.2
5	1.7
6	1.7
Q104	
1	4.9
2	2.4
3	4.9
4	2.4
5	1.7
6	1.7
Q201	
1	3.8
2	4.4
3	3.8
4	4.6
5	4.4

4.25 WAVEFORMS

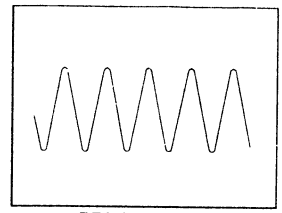
— SYSCON —

WF1 IC1-89



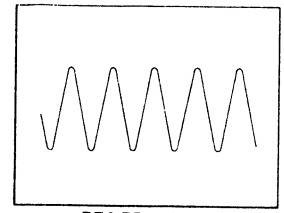
REC/PB 0.2Vp-p
10mV/0.2msec/DIV

WF2 IC1-90



REC/PB 1.5Vp-p
50mV/0.2msec/DIV

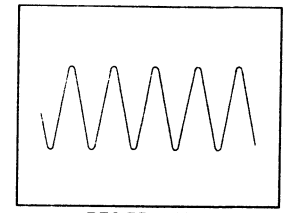
WF3 IC1-91



REC/PB 2.5Vp-p
0.1V/0.2msec/DIV

— MDA —

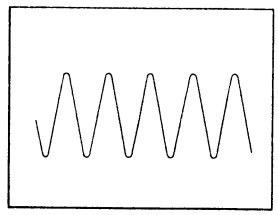
WF1 IC301-3



REC/PB 1.5Vp-p
50mV/0.5msec/DIV

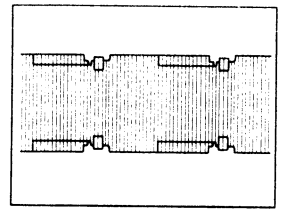
— PROCESS&Y/C —

WF2 IC351-15



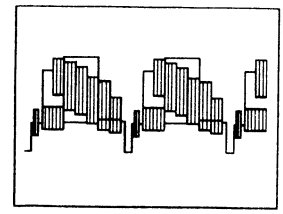
REC/PB 2.5Vp-p
50mV/0.2msec/DIV

WF1 IC501-39



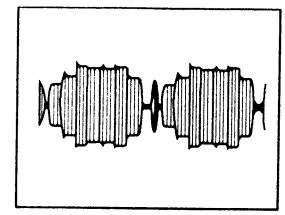
REC 1.7Vp-p
50mV/5msec/DIV

WF2 IC501-50



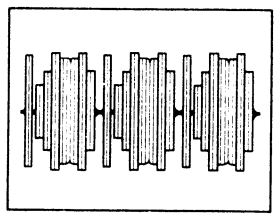
REC2.3Vp-p, PB2.0Vp-p
0.1V/10 μ sec/DIV

WF3 IC501-57



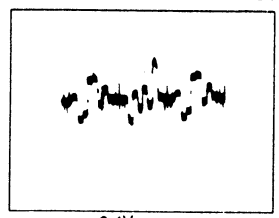
PB0.1Vp-p
5mV/20 μ sec/DIV

WF4 IC501-60



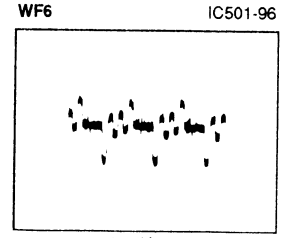
REC 0.5Vp-p
10mV/20 μ sec/DIV

WF5 IC501-94



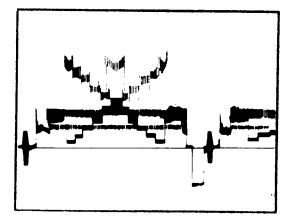
0.4Vp-p
10mV/50 μ sec/DIV

WF6 IC501-96



0.65Vp-p
10mV/50 μ sec/DIV

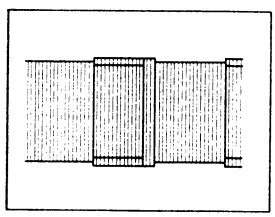
WF7 IC501-116



1.2Vp-p
20mV/20 μ sec/DIV

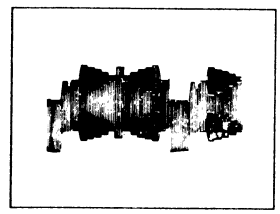
— CCD —

WF8 IC502-10



PB 0.5Vp-p
20mV/1msec/DIV

WF1 CN201-4



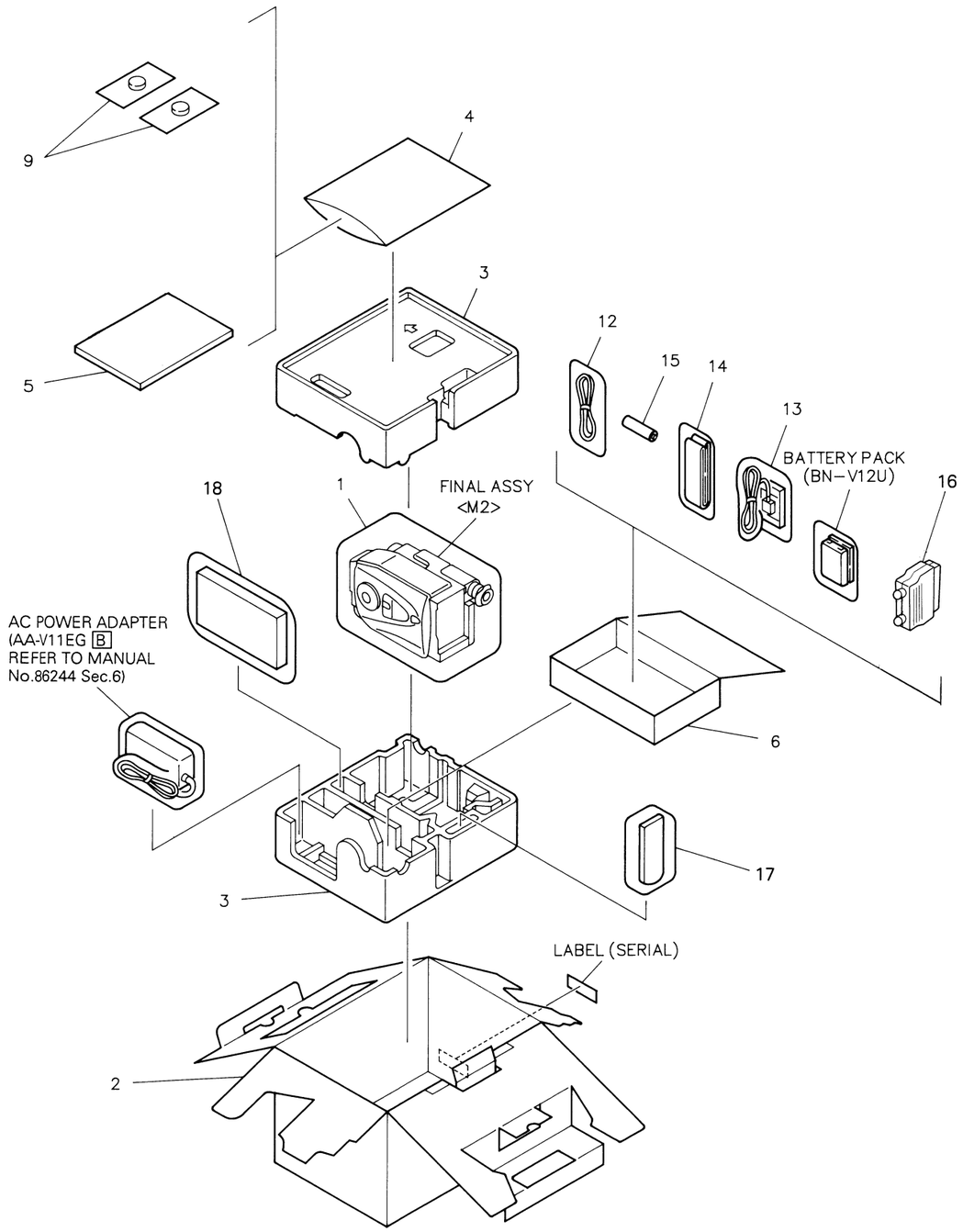
0.5Vp-p
20mV/20 μ sec/DIV

SECTION 5
PARTS LIST

SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.

5.1 PACKING ASSEMBLY <M1>

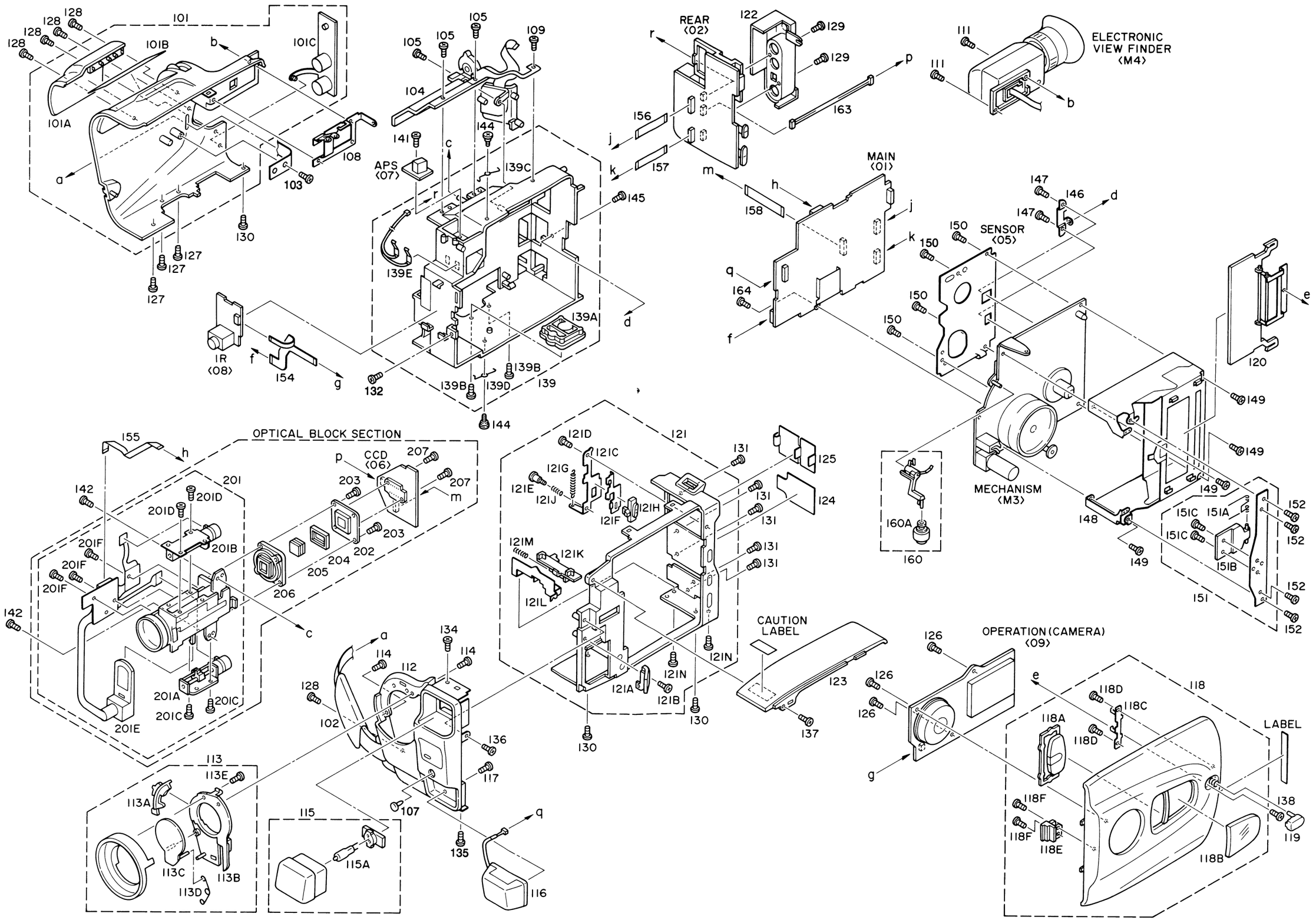


#⚠	REF No.	PART No.	PART NAME, DESCRIPTION
			**********
			PACKING ASSEMBLY <M1>
	1	YQM30021-32	POLY BAG
	2	YQ31868-16	PACKING CASE,AX400EG
		YQ31868-24	PACKING CASE,AX350EG
		YQ31868-22	PACKING CASE,AX200EG
	3	YQ31869A-2	CUSHION ASSY
	4	YQM30061-2	POLY BAG
⚠	5	YU30052-469	INSTRUCTIONS,AX200EG
⚠		YU30052-459	INSTRUCTIONS,AX350EG/AX400EG
	6	YQ20865	ACCESSORY CASE
⚠	9	PECA0903	LI BATTERY,AX200EG/AX350EG
⚠		PECA0903	LI BATTERY,X2 AX400EG
	12	PEAC0368-150	CABLE ASSY,EDITING CABLE
	13	PEAC0134-01-04	DC PLUG CORD
	14	YQ10188A-1	S STRAP ASSY
	15	R6PRPA-2ST	BATTERY
	16	PEMC0945	CONNECTOR
⚠	17	YQ20710C	REMOTE CONTROLLER,AX400EG
	18	YQ31963A-3	CASSETTE ADAPTER ASSY
		or YQ31963B-3	CASSETTE ADAPTER ASSY

*INSTRUCTIONS

ENGLISH
FRENCH
GERMAN
SPANISH
DUTCH
SWEDISH
ITALIAN
DANISH
FINNISH

5.2 FINAL ASSEMBLY <M2>



#⚠	REF No.	PART No.	PART NAME, DESCRIPTION

****

FINAL ASSEMBLY <M2>

⚠	101	YQ10522AR	LOWER CASE ASSY
	101A	YQ31804-4	D.COVER
	101B	YQ31806-14	SHEET
	101C	YQ31850	CAP(JACK)
	102	YQ20824-2	GRIP BELT
	103	YQM30032-42	SPECIAL SCREW,M2.6X6
	104	YQ10518-3-5	OPERATION UNIT
	105	YQM30032-60	SPECIAL SCREW,X3 M2X5
	107	YQ43518	CAP(JACK)
	108	YQ31981	BRACKET(VF)
	109	YQM30032-59	SPECIAL SCREW,M2X2
	111	YQM30032-5-2	SPECIAL SCREW,X2 M2X6
⚠	112	YQ10524E-3	FRONT COVER ASSY,AX400EG
⚠		YQ10554B	FRONT COVER ASSY,AX200EG/AX350EG
	113	YQ31847B	HOOD ASSY
	113A	YQ31811-2	KNOB(RING)
	113B	YQ31812	GUIDE
	113C	YQ43798	SHUTTER
	113D	YQ43799	TORSION SPRING
	113E	YQM30032-60	SPECIAL SCREW,M2X5
	114	YQM30032-61	SPECIAL SCREW,X2 M2X6
⚠	115	YQ20802-2	DC LIGHT,AX400EG
	115A	YQ20645-001	VIDEO LIGHT BLUB,AX400EG
	116	YQ20811	MICROPHONE
	117	YQM30032-61	SPECIAL SCREW,M2X6
⚠	118	YQ10526K-6	CASSETTE COVER ASSY,AX400EG
⚠		YQ10526P-6	CASSETTE COVER ASSY,AX200EG
⚠		YQ10526Q-6	CASSETTE COVER ASSY,AX350EG
	118A	YQ31813-2	BUTTON(SELECT)
	118B	YQ31816-2	WINDOW(LCD),AX400EG
		YQ31816-3	WINDOW(LCD),AX200EG/AX350EG
	118C	YQ43800-1-1	BRACKET(C.LOCK)
	118D	YQM30032-4-2	SPECIAL SCREW,X2 M2X6
	118E	YQ43802-1-2	HINGE(C.COVER)
	118F	YQM30032-4-2	SPECIAL SCREW,X2 M2X6
	119	YQ31815-2-2	BUTTON(PUSH)
	120	YQ31822A-1	CASS.COVER INSIDE ASSY
⚠	121	YQ10528E-1	UPPER CASE ASSY,AX400EG
⚠		YQ10528J-1	UPPER CASE ASSY,AX200EG/AX350EG
	121A	YQ31818	HINGE(UPPER)
	121B	YQM30032-4-2	SPECIAL SCREW,M2X6
	121C	YQ43803	BRACKET(LOCK)
	121D	YQM30032-44	SPECIAL SCREW,M2X4
	121E	YQM30060-6	SPECIAL SCREW
	121F	YQ43804	BRACKET(SLIDE)
	121G	YQM30001-66	TENSION SPRING
	121H	YQ31842-2	BUTTON(EJECT)
	121J	YQM30002-45	COMPRESSION SPRING
	121K	YQ31819-2	KNOB(B.RELEASE)
	121L	YQ31820	BRACKET(B.RE)
	121M	YQM30002-44	COMPRESSION SPRING
	121N	YQM30032-1-2	SPECIAL SCREW,X2 M2X3
⚠	122	YQ20814-5-2	COVER(JACK)
	123	YQ31864AC-7	TOP COVER ASSY, AX200EG/AX350EG
⚠		YQ31864D-4	TOP COVER ASSY,AX400EG
⚠	124	YQ31848-2	SHEET(BATT.)
	125	YQ31821	CAP(LITHIUM)
	126	YQM30032-61	SPECIAL SCREW,X3 M2X6
	127	YQM30032-61	SPECIAL SCREW,X3 M2X6
	128	YQM30032-61	SPECIAL SCREW,X5 M2X6
	129	YQM30032-61	SPECIAL SCREW,X2 M2X6
	130	YQM30032-61	SPECIAL SCREW,X3 M2X6
	131	YQM30032-61	SPECIAL SCREW,X5 M2X6
	132	YQM30032-61	SPECIAL SCREW,M2X6
	134	YQM30032-61	SPECIAL SCREW,M2X6
	135	YQM30032-61	SPECIAL SCREW,M2X6
	136	YQM30032-61	SPECIAL SCREW,M2X6
	137	YQM30032-61	SPECIAL SCREW,M2X6
	138	YQM30032-3-2	SPECIAL SCREW,M2X5
⚠	139	YQ10530B-2	FRAME ASSY,AX200EG/AX350EG
⚠		YQ10530A-2	FRAME ASSY,AX400EG
	139A	YQ31843	BASE
	139B	YQM30032-4-2	SPECIAL SCREW,X2 M2X6
	139C	YQ43543	SPRING(TOR.1)
	139D	YQ43555	SPRING(TOR.2)
	139E	YQ43810	CONTACT(LIGHT),X2 AX400EG
	141	YQM30032-60	SPECIAL SCREW,M2X5 AX400EG
	142	YQM30032-60	SPECIAL SCREW,X2 M2X5
	144	YQ43545	SPECIAL SCREW,X2
	145	YQM30032-3-2	SPECIAL SCREW,M2X5
	146	YQ43544	BRACKET(MECHA)
	147	SPSH1725Z	SCREW,X2
	148	YQ31752A-2	CASSETTE HOUSING ASSY
	149	SPSH1725M	SCREW,X4
	150	SPSH1730M	SCREW,X4
	151	YQ31762B	FRONT FRAME ASSY
	151A	YQ44144	TAPE GUIDE
	151B	YQ31794-2	TAPE G.HOLDER
	151C	SPSH1720M	SCREW,X2
	152	SPSH1725Z	SCREW,X4
	154	PEWR0767	FPC
	155	PEWR0787	FFC
	156	PEWR0789	FFC
	157	PEWR0786	FFC
	158	PEWR0771	FFC
	160	YQ44027A-6	CLEANER ASSY
	160A	YQ44109A-2	CLEANER ROLLER ASSY
	163	ML-Y00720A	CCD WIRE
	164	SPSH1720M	SCREW

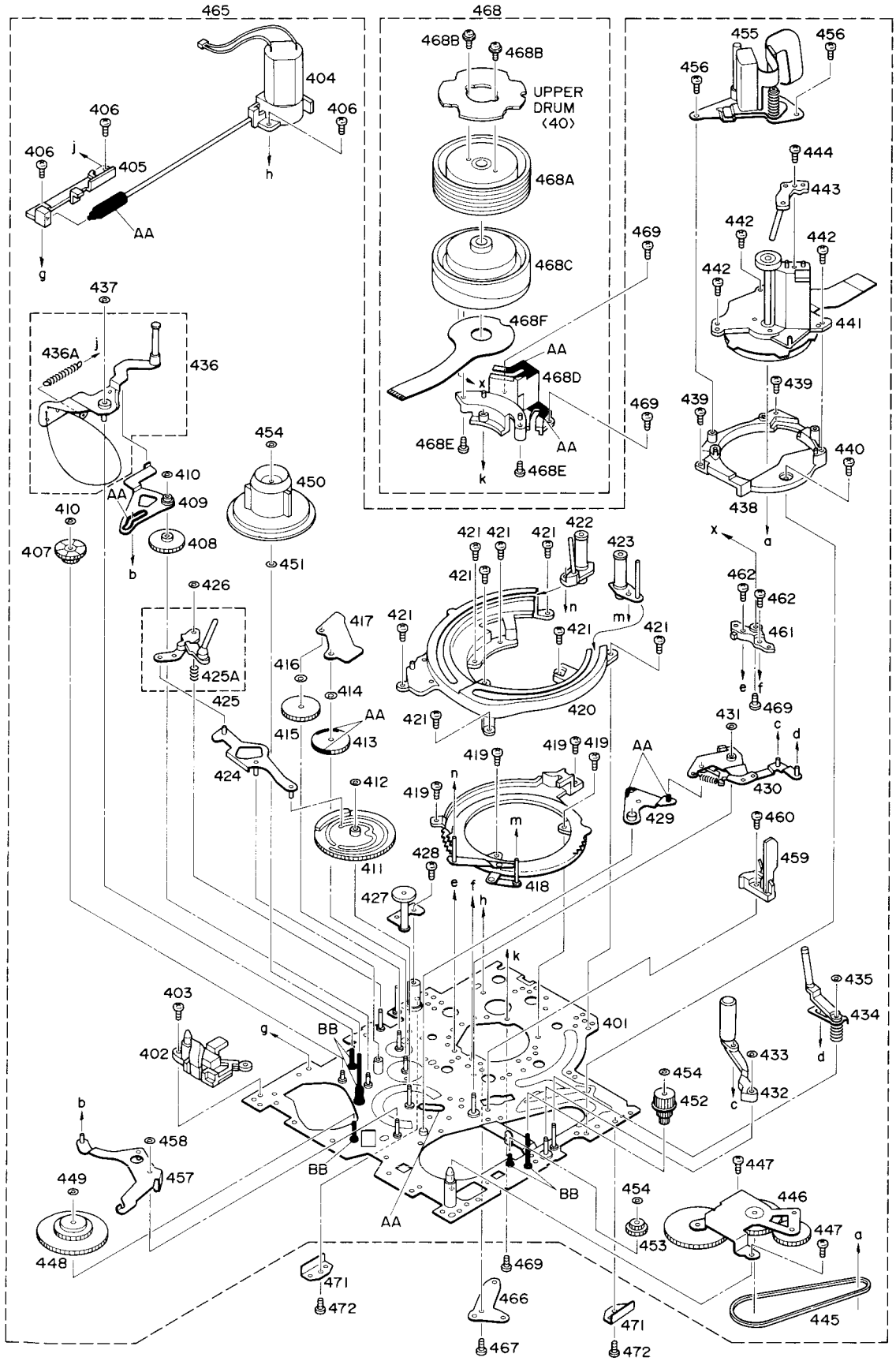
– OPTICAL BLOCK SECTION –

201	YU30787-1-1	OP BLOCK ASSY
201A	YU30787-002	FOCUS MOTOR UNIT
201B	YU30787-001	ZOOM MOTOR UNIT
201C	YU30787-010	SCREW,X2
201D	YU30787-010	SCREW,X2
201E	YU30787-006	IRIS FPC ASSY
201F	YU30787-010	SCREW,X3
202	YS40113D	CCD BASE ASSY
203	SPSN2090Z	SCREW,X2
204	YQ31844	SPACER RUBBER
205	YU42079	OP LOW PASS FILTER
206	YQ20823	CCD SPACER
207	SPSP2006Z	SCREW,X2

5.3 MECHANISM ASSEMBLY <M3>

BEWARE OF BOGUS PARTS

Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.



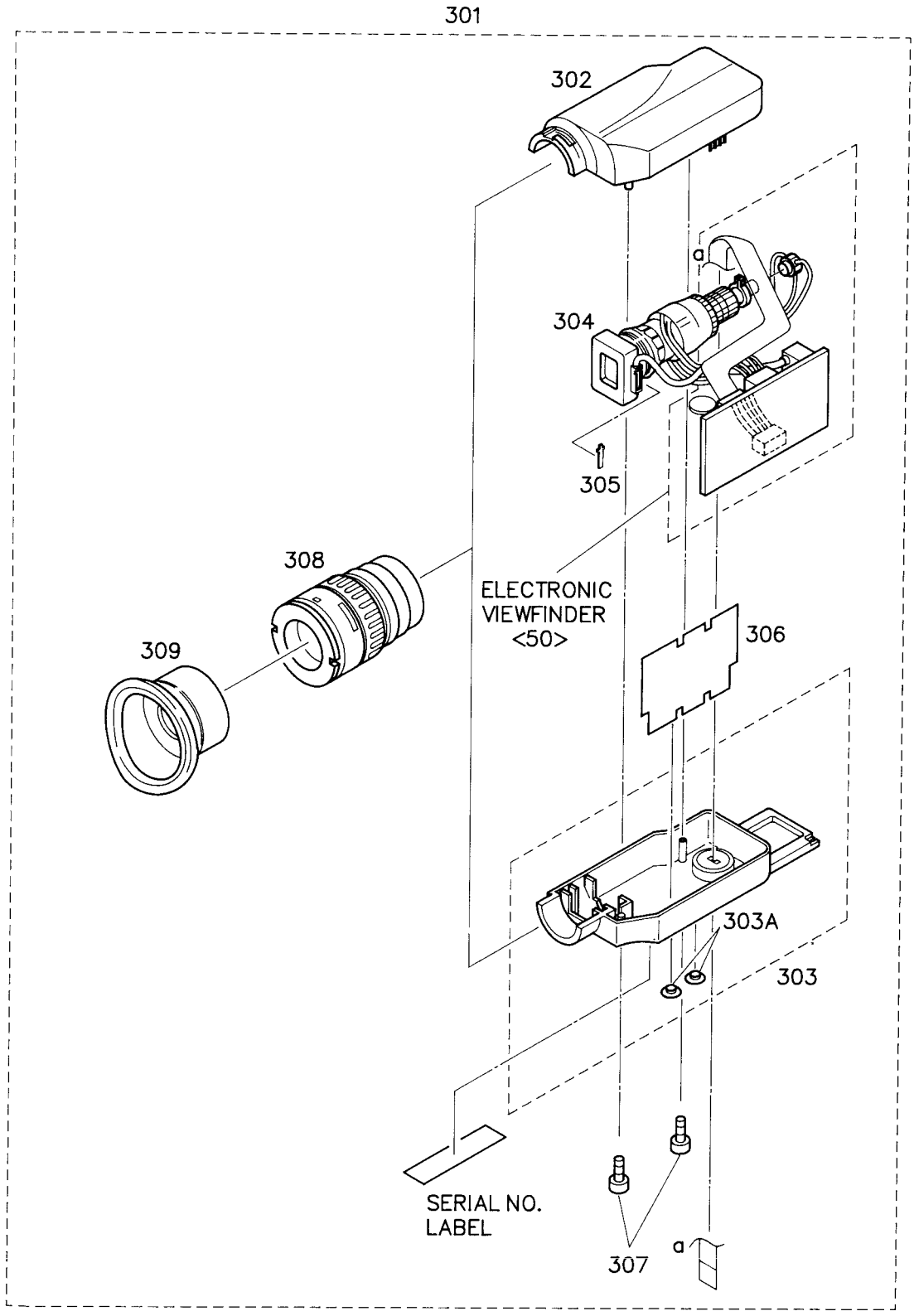
Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-P	AA
Oil	YTU94027	BB

NOTE: The section marked in AA and BB indicate lubrication and greasing areas.

MECHANISM ASSEMBLY <M3>

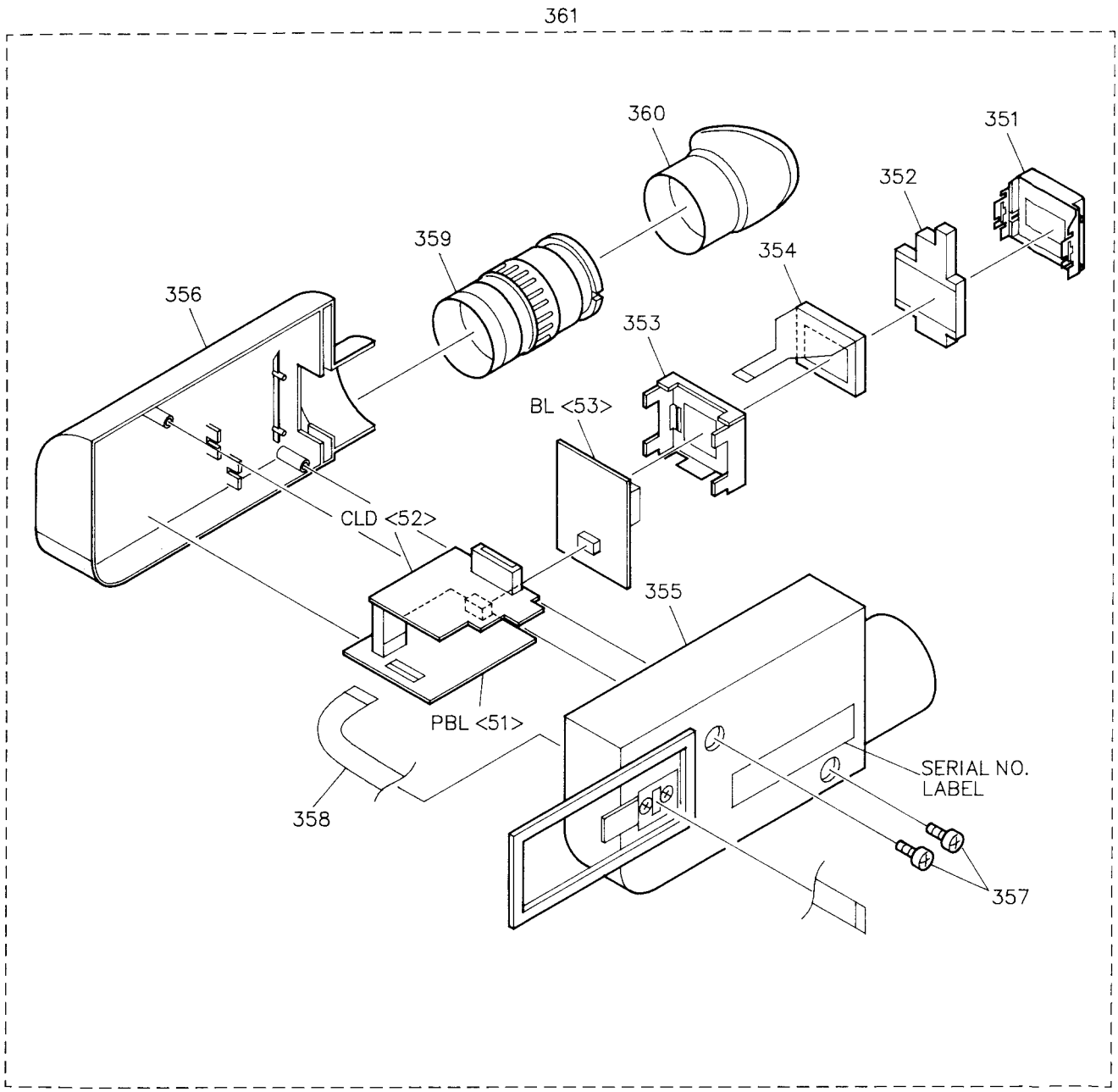
#△ REF No.	PART No.	PART NAME, DESCRIPTION
401	YQ20790A-5	MAIN DECK ASSY
402	YQ43618A-2	CASS.GUIDE(L) ASSY
403	SPSH1740Z	SCREW
404	YQ31856A-1	MOTOR BRACKET ASSY
405	YQ20793	WORM BRACKET
406	SPSH1740Z	SCREW,X3
407	YQ31783	WHEEL GEAR
408	YQ43627	MIDDLE GEAR
409	YQ43849A-1	CANCEL LEVER ASSY
410	PQM30017-27	SLIT WASHER,X2
411	YQ20827	CONTROL CAM
412	PQM30017-25	SLIT WASHER
413	YQ43853A	LOADING GEAR(T) ASSY
414	PQM30017-27	SLIT WASHER
415	YQ43852A	LOADING GEAR(S)ASSY
416	PQM30017-27	SLIT WASHER
417	YQ43634	COVER PLATE
418	YQ43635B	LOADING RING ASSY
419	SPSH1740Z	SCREW,X4
420	YQ10516-1-5	GUIDE RAIL
421	SPSH1730M	SCREW,X8
422	YQ43646A-4	SUPPLY POLE BASE ASSY
423	YQ43654A-6	TAKE-UP POLE BASE ASSY
424	YQ43659A-1	DRIVE LEVER ASSY
425	YQ43663B-5	SLANT ARM ASSY
425A	YQ43670	TOR.SPRING(S)
426	PQM30017-27	SLIT WASHER
427	YQ44126A	ROLLER BASE ASSY
428	SPSH1730M	SCREW
429	YQ43678A	LINK LEVER ASSY
430	YQ43682A-4	LINK ARM ASSY
431	PQM30017-25	SLIT WASHER
432	YQ43691A-3	PINCH ROLLER ARM ASSY
433	PQM30017-25	SLIT WASHER
434	YQ43698A-2	TAKE-UP GUIDE ARM ASSY
435	PQM30017-27	SLIT WASHER
436	YQ43844A-11	TENSION ARM ASSY
436A	YQ43848-1-2	TENSION SPRING
437	PQM30017-27	SLIT WASHER
438	YQ20797-1-1	MOTOR BASE
439	SPSH1740Z	SCREW,X2
440	SSSH1730M	SCREW
441	YU42048-1-2	CAPSTAN MOTOR
442	SPSN1755M	SCREW,X3
443	YQ43708A-2	SLANT POLE BASE ASSY
444	SPSN1755M	SCREW
445	YQ43710	TIMING BELT
446	YQ43711B-6	CENTER PULLEY UNIT
447	SPSH1730M	SCREW,X2
448	YQ43729A	SUPPLY CLUCH ASSY
449	PQM30017-27	SLIT WASHER
450	YQ31861-1-7	REEL DISK
451	Q03093-835	WASHER
452	YQ31787	TAKE-UP GEAR
453	YQ43737	BRAKE SUB GEAR
454	PQM30017-27	SLIT WASHER,X3
455	YQ43738A-7	A/C HEAD UNIT
456	SPSN1750Z	SCREW,X2
457	YQ43743A-1	EJECT LEVER ASSY
458	PQM30017-27	SLIT WASHER
459	YQ31833-1-1	LED GUIDE
460	SPSH1730M	SCREW
461	YQ43818	DRUM SPACER
462	SPSH1740Z	SCREW,X2
465	YMA0016A	MECHA(A) ASSY
466	YU42051	BRUSH
467	SPSH1720M	SCREW
468	YDV2066A	DRUM ASSY
468A	YDM2067B	UPPER DRUM ASSY
468B	YDM4031	SCREW,X2
468C	YDM2083A	LOWER DRUM ASSY
468D	YDM1003-1-5	CHATCHER
468E	SPSH1730M	SCREW,X2
468F	YDM2080	OUT PUT FPC
469	SPSH1740Z	SCREW,X4
471	YQ43779	SIDE BRAKET,X2
472	SPSH1720M	SCREW,X2

5.4 ELECTRONIC VIEWFINDER ASSEMBLY <M4> [GR-AX200EG/AX400EG]



#⚠	REF No.	PART No.	PART NAME, DESCRIPTION
**********			
ELECTRONIC VIEWFINDER ASSEMBLY(GR-AX200EG/AX400EG) <M4>			
⚠	301	YQ31803C	E.VF ASSY
⚠	302	YQ10534-2	TOP CASE
⚠	303	YQ31841B	BOTTOM CASE ASSY
	303A	YQ44018	CAP,X2
⚠	304	YQ31803-001	CRT/DY ASSY
⚠	305	YU30181-014	HV COVER
	306	YQ31803-100	INSULATOR
	307	YU30045-014	SCREW,X2 M1.7X5
	308	YQ31803-200	LENS ASSY
	309	YQ31803-201	EYE CAP

5.5 ELECTRONIC VIEWFINDER ASSEMBLY <M4> [GR-AX350EG]



#△	REF No.	PART No.	PART NAME, DESCRIPTION
	ELECTRONIC VIEWFINDER ASSEMBLY(GR-AX350EG) <M4>		
	351	YQ31801-1-1	HOLDER(LCD)
	352	YQ43792	WINDOW(LCD)
	353	YQ31802	HOLDER(LAMP)
	354	PEDP0177	LCD PANEL
△	355	YQ31958B	BOTTOM CASE ASSY

#△	REF No.	PART No.	PART NAME, DESCRIPTION
△	356	YQ31932E	TOP CASE ASSY
	357	SPSN2080M	SCREW,X2
	358	PEWR0775	FPC
	359	YQ31803-200	LENS ASSY
	360	YQ31803-201	EYE CAP
	361	YS20782H	E.VF ASSY

MAIN BOARD ASSEMBLY <01>

#△ REF No.	PART No.	PART NAME, DESCRIPTION
PWBA	YB10137F-03	MAIN BOARD ASSY,AX200EG/AX400EG
	YB10137H-03	MAIN BOARD ASSY,AX350EG
IC1	M37771M6A158HP	IC
	or M37771M6A160HP	IC
IC2	UPD6462GS-902-X	IC
IC4	XRU4584BF	IC
IC5	S-8423PFS-X	IC
IC6	BA6417F	IC
IC301	VC5035-XE	IC
IC351	BA6862FS	IC
IC401	BA7751AFS	IC
IC402	BA15218F	IC
	or XRA15218F	IC
IC501	JCY0050	IC
IC502	M52364FP	IC
IC503	MN3867S	IC
IC601	M52359FP	IC
IC801	XRU4053BCF	IC
IC802	XRA10324AFV-XE	IC
IC803	XRA10358F	IC
	or UPC358GR	IC
IC804	XRA10324AFV-XE	IC
IC805	XRA10324AFV-XE	IC
IC901	UPD78054GC-062	IC
IC902	JCY0007-1-XE	IC
IC903	X25C02S-XE	IC
IC904	S-81250HG-RD-X	IC
IC905	XRA10324AFV-XE	IC
IC906	MC14011BDT	IC
	or TC4011BFS	IC
IC907	TB6504F	IC
IC908	TB6504F	IC
IC909	PST9140N	IC
IC910	UPC358GR	IC
IC911	TC4W66F	IC
Q1	2SA1576(QRS)	TRANSISTOR
Q2	DTC114EU	TRANSISTOR
Q3	DTA114EU	TRANSISTOR
Q5	DTA114EU	TRANSISTOR
Q6	DTC114EU	TRANSISTOR
Q7	2SA1576(QRS)	TRANSISTOR
Q201	DTC144EE	TRANSISTOR
	or UN9213	TRANSISTOR
Q202	2SC4617(RS)	TRANSISTOR
Q203	DTA114EE	TRANSISTOR
	or UN9111	TRANSISTOR
Q351	MDC02	TRANSISTOR
Q401	DTA123EE	TRANSISTOR
	or UN911V	TRANSISTOR
Q402	DTA143EE	TRANSISTOR
	or UN911L	TRANSISTOR
Q403	UMW1N	PAIR TRANSISTOR
	or XP1501	TRANSISTOR
Q404	DTA124EE	TRANSISTOR
	or UN9112	TRANSISTOR
Q405	DTC144EE	TRANSISTOR
	or UN9213	TRANSISTOR
Q408	2SC4097(QR)	TRANSISTOR
Q503	2SC4617(QRS)	TRANSISTOR
Q504	2SA1774(QRS)	TRANSISTOR
Q505	2SA1774(QRS)	TRANSISTOR
Q506	2SA1774(QRS)	TRANSISTOR
Q601	2SD2114K(UV)	TRANSISTOR
Q602	2SD2114K(UV)	TRANSISTOR
Q603	2SD2114K(UV)	TRANSISTOR
Q604	2SD2114K(UV)	TRANSISTOR
Q605	2SA1774(QRS)	TRANSISTOR
Q701	2SC4617(QRS)	TRANSISTOR
Q704	2SC4617(QRS)	TRANSISTOR
Q706	DTC144EE	TRANSISTOR
	or UN9213	TRANSISTOR
Q781	DTA143EU	TRANSISTOR
Q782	2SC4081(R)	TRANSISTOR
Q783	2SC4081(R)	TRANSISTOR
Q784	2SC4081(R)	TRANSISTOR
Q802	DTC114TU	TRANSISTOR
Q803	XP1216	TRANSISTOR
	or UMG3N	PAIR TRANSISTOR
Q804	DTC114TU	TRANSISTOR
Q805	XP1216	TRANSISTOR
	or UMG3N	PAIR TRANSISTOR
Q810	2SA1774(QRS)	TRANSISTOR
Q811	2SA1774(QRS)	TRANSISTOR
Q812	2SA1774(QRS)	TRANSISTOR
Q901	DTC144WU	TRANSISTOR
Q902	DTA114EU	TRANSISTOR
Q904	XP1216	TRANSISTOR
	or UMG3N	PAIR TRANSISTOR
Q905	XP5601	TRANSISTOR
Q906	XP5601	TRANSISTOR
Q907	XP5601	TRANSISTOR
D2	RD22M(B1-3)-X	ZENER DIODE
D3	1SS355	DIODE
D301	MA132WK	DIODE
D502	DAN222	DIODE
D503	DAN222	DIODE
D504	DAN222	DIODE,AX350EG
D505	DAN222	DIODE
D801	1SS355	DIODE
D802	1SS355	DIODE
D803	DAN202U	DIODE
D901	1SS355	DIODE
D902	1SS355	DIODE
D903	1SS355	DIODE
D904	MA30(A)	DIODE
DA1	DAP202U	DIODE
DA2	DAP202U	DIODE
DA3	DAP202U	DIODE
R2	NRSA63J-473N	RESISTOR 47kΩ,1/16V
R3	NRSA63J-102N	RESISTOR 1kΩ,1/16V
R4	NRSA63J-473N	RESISTOR 47kΩ,1/16V
R5	NRSA63J-105N	RESISTOR 1MΩ,1/16V
R6	NRSA63J-221N	RESISTOR 220Ω,1/16V
R7	NRSA63J-124N	RESISTOR 120kΩ,1/16V
R8	NRVA63D-623N	MF RESISTOR 62kΩ,1/16V
R9	NRSA63J-302N	RESISTOR 3kΩ,1/16V
R10	NRVA63D-683N	MF RESISTOR 68kΩ,1/16V
R11	NRSA63J-472N	RESISTOR 4.7kΩ,1/16V
R12	NRSA63J-103N	RESISTOR 10kΩ,1/16V

#△ REF No.	PART No.	PART NAME, DESCRIPTION	
R13	NRSA63J-223N	RESISTOR	22kΩ,1/16W
R14	NRSA63J-474N	RESISTOR	470kΩ,1/16W
R22	NRSA63J-473N	RESISTOR	47kΩ,1/16W
R23	NRSA63J-685N	RESISTOR	6.8MΩ,1/16W
R24	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R25	NRSA63J-105N	RESISTOR	1MΩ,1/16W
R26	NRSA63J-221N	RESISTOR	220Ω,1/16W
R27	NRSA63J-122N	RESISTOR	1.2kΩ,1/16W
R28	NRSA63J-751N	RESISTOR	750Ω,1/16W
R29	NRSA63J-751N	RESISTOR	750Ω,1/16W
R30	NRSA63J-562N	RESISTOR	5.6kΩ,1/16W
R31	NRSA63J-821N	RESISTOR	820Ω,1/16W
R32	NRSA63J-101N	RESISTOR	100Ω,1/16W
R36	NRSA63J-153N	RESISTOR	15kΩ,1/16W
R37	NRSA63J-683N	RESISTOR	68kΩ,1/16W
R38	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R39	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R40	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R41	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R43	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R53	NRSA63J-751N	RESISTOR	750Ω,1/16W
R60	NRSA63J-103N	RESISTOR,AX350EG	10kΩ,1/16W
R61	NRSA63J-103N	RESISTOR,AX200EG/AX400EG	10kΩ,1/16W
	NRSA63J-152N	RESISTOR,AX350EG	1.5kΩ,1/16W
R63	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R67	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R69	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R70	NRSA63J-474N	RESISTOR	470kΩ,1/16W
R71	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R72	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R73	NRSA63J-391N	RESISTOR	390Ω,1/16W
R74	NRSA63J-472N	RESISTOR	4.7kΩ,1/16W
R75	NRSA63J-104N	RESISTOR	100kΩ,1/16W
R201	NRSA63J-332N	RESISTOR	3.3kΩ,1/16W
R202	NRSA63J-332N	RESISTOR	3.3kΩ,1/16W
R203	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R204	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R205	NRSA63J-472N	RESISTOR	4.7kΩ,1/16W
R206	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R207	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R208	NRSA63J-273N	RESISTOR	27kΩ,1/16W
R209	NRSA63J-331N	RESISTOR	330Ω,1/16W
R210	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R211	NRSA63J-561N	RESISTOR	560Ω,1/16W
R212	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R213	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R301	NRSA63J-2R2N	RESISTOR	2.2Ω,1/16W
R302	NRSA63J-2R2N	RESISTOR	2.2Ω,1/16W
R303	NRSA63J-2R2N	RESISTOR	2.2Ω,1/16W
R304	NRSA63J-121N	RESISTOR	120Ω,1/16W
R305	NRSA63J-393N	RESISTOR	39kΩ,1/16W
R306	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R307	NRSA63J-154N	RESISTOR	150kΩ,1/16W
R308	NRSA63J-153N	RESISTOR	15kΩ,1/16W
R310	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R311	NRSA63J-333N	RESISTOR	33kΩ,1/16W
R312	NRSA63J-473N	RESISTOR	47kΩ,1/16W
R313	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R314	YU41353-R68N	RESISTOR	0.68Ω,1/2W
R351	NRSA63J-474N	RESISTOR	470kΩ,1/16W
R352	NRSA63J-154N	RESISTOR	150kΩ,1/16W
R353	NRSA63J-104N	RESISTOR	100kΩ,1/16W

#△ REF No.	PART No.	PART NAME, DESCRIPTION	
R354	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R355	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R356	NRSA63J-104N	RESISTOR	100kΩ,1/16W
R357	NRSA63J-153N	RESISTOR	15kΩ,1/16W
R358	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R359	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R360	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R361	NRSA63J-104N	RESISTOR	100kΩ,1/16W
R362	YU41353-R68N	RESISTOR	0.68Ω,1/2W
R401	NRVA63D-392N	MF RESISTOR	3.9kΩ,1/16W
R402	NRVA63D-272N	MF RESISTOR	2.7kΩ,1/16W
R403	NRVA63D-152N	MF RESESTOR	
R404	NRSA63J-820N	RESISTOR	82Ω,1/16W
R405	NRSA63J-820N	RESISTOR	82Ω,1/16W
R406	NRSA63J-820N	RESISTOR	82Ω,1/16W
R409	NRSA63J-100N	RESISTOR	10Ω,1/16W
R410	NRVA63D-103N	MF RESISTOR	10kΩ,1/16W
R411	NRSA63J-472N	RESISTOR	4.7kΩ,1/16W
R412	NRSA63J-272N	RESISTOR	2.7kΩ,1/16W
R413	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R414	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R415	NRSA63J-132N	RESISTOR	1.3kΩ,1/16W
R417	NRSA63J-822N	RESISTOR	8.2kΩ,1/16W
R418	NRSA63J-104N	RESISTOR	100kΩ,1/16W
R420	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R421	NRSA63J-823N	RESISTOR	82kΩ,1/16W
R422	NRSA63J-561N	RESISTOR	560Ω,1/16W
R423	NRSA63J-562N	RESISTOR	5.6kΩ,1/16W
R424	NRSA63J-822N	RESISTOR	8.2kΩ,1/16W
R425	NRSA63J-334N	RESISTOR	330kΩ,1/16W
R426	NRSA63J-470N	RESISTOR	47Ω,1/16W
R428	NRSA63J-155N	RESISTOR	1.5MΩ,1/16W
R429	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R430	NRSA63J-223N	RESISTOR	22kΩ,1/16W
R431	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R433	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R434	NRSA63J-472N	RESISTOR	4.7kΩ,1/16W
R436	NRSA63J-561N	RESISTOR	560Ω,1/16W
R437	NRSA63J-104N	RESISTOR	100kΩ,1/16W
R438	NRSA63J-182N	RESISTOR	1.8kΩ,1/16W
R439	NRSA63J-123N	RESISTOR	12kΩ,1/16W
R444	NRSA63J-331N	RESISTOR	330Ω,1/16W
R445	NRSA63J-472N	RESISTOR	4.7kΩ,1/16W
R446	NRVA63D-104N	MF RESISTOR	100kΩ,1/16W
R447	NRVA63D-104N	MF RESISTOR	100kΩ,1/16W
R448	NRVA63D-513N	MF RESISTOR	51kΩ,1/16W
R451	NRVA63D-392N	MF RESISTOR	3.9kΩ,1/16W
R452	NRVA63D-222N	MF RESISTOR	2.2kΩ,1/16W
R453	NRVA63D-152N	MF RESISTOR	1.5kΩ,1/16W
R454	NRVA63D-302N	MF RESISTOR	3kΩ,1/16W
R455	NRSA63J-104N	RESISTOR	100kΩ,1/16W
R456	NRSA63J-3R3N	RESISTOR	3.3Ω,1/16W
R457	NRSA63J-153N	RESISTOR	15kΩ,1/16W
R459	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R501	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R503	NRSA63J-105N	RESISTOR	1MΩ,1/16W
R504	NRSA63J-154N	RESISTOR	150kΩ,1/16W
R505	NRSA63J-681N	RESISTOR	680Ω,1/16W
R506	NRSA63J-471N	RESISTOR	470Ω,1/16W
R507	NRSA63J-182N	RESISTOR	1.8kΩ,1/16W
R508	NRSA63J-223N	RESISTOR	22kΩ,1/16W
R509	NRSA63J-152N	RESISTOR	1.5kΩ,1/16W

#△ REF No.	PART No.	PART NAME, DESCRIPTION	
R510	NRSA63J-391N	RESISTOR	390Ω,1/16W
R511	NRSA63J-122N	RESISTOR	1.2kΩ,1/16W
R514	NRSA63J-472N	RESISTOR	4.7kΩ,1/16W
R515	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R516	NRSA63J-331N	RESISTOR	330Ω,1/16W
R518	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R519	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R520	NRSA63J-682N	RESISTOR	6.8kΩ,1/16W
R521	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R522	NRVA63D-221N	RESISTOR	220Ω,1/16W
R523	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R524	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R525	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R526	NRSA63J-431N	RESISTOR	430Ω,1/16W
R527	NRSA63J-102N	RESISTOR,AX200EG/AX400EG	1kΩ,1/16W
	NRSA63J-821N	RESISTOR,AX350EG	820Ω,1/16W
R528	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R529	NRSA63J-431N	RESISTOR	430Ω,1/16W
R530	NRSA63J-102N	RESISTOR,AX200EG/AX400EG	1kΩ,1/16W
	NRSA63J-821N	RESISTOR,AX350EG	820Ω,1/16W
R531	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R532	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R533	NRSA63J-0R0N	RESISTOR,AX350EG	0Ω,1/16W
R534	NRSA63J-0R0N	RESISTOR,AX350EG	0Ω,1/16W
R535	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R536	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R537	NRSA63J-123N	RESISTOR	12kΩ,1/16W
R538	NRSA63J-822N	RESISTOR	8.2kΩ,1/16W
R541	NRSA63J-103N	RESISTOR,AX350EG	10kΩ,1/16W
R543	NRVA63D-221N	RESISTOR	220Ω,1/16W
R544	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R545	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R546	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R561	NRSA63J-821N	RESISTOR	820Ω,1/16W
R563	NRSA63J-471N	RESISTOR	470Ω,1/16W
R564	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R565	NRSA63J-391N	RESISTOR	390Ω,1/16W
R566	NRSA63J-471N	RESISTOR	470Ω,1/16W
R567	NRSA63J-562N	RESISTOR	5.6kΩ,1/16W
R568	NRSA63J-471N	RESISTOR	470Ω,1/16W
R569	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R570	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R571	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R573	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R576	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R577	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R601	NRSA63J-331N	RESISTOR	330Ω,1/16W
R602	NRSA63J-511N	RESISTOR	510Ω,1/16W
R603	NRSA63J-511N	RESISTOR	510Ω,1/16W
R604	NRSA63J-331N	RESISTOR	330Ω,1/16W
R605	NRSA63J-511N	RESISTOR	510Ω,1/16W
R606	NRSA63J-331N	RESISTOR	330Ω,1/16W
R608	NRSA63J-392N	RESISTOR	3.9kΩ,1/16W
R609	NRSA63J-331N	RESISTOR	330Ω,1/16W
R610	NRSA63J-511N	RESISTOR	510Ω,1/16W
R611	NRVA62D-914N	RESISTOR	910kΩ,1/16W
R612	NRSA63J-332N	RESISTOR	3.3kΩ,1/16W
R613	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R617	NRSA63J-223N	RESISTOR	22kΩ,1/16W
R618	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R619	NRSA63J-513N	RESISTOR	51kΩ,1/16W
R620	NRSA63J-513N	RESISTOR	51kΩ,1/16W

#△ REF No.	PART No.	PART NAME, DESCRIPTION	
R621	NRSA63J-513N	RESISTOR	51kΩ,1/16
R623	NRSA63J-561N	RESISTOR	560Ω,1/16
R624	NRSA63J-222N	RESISTOR	2.2kΩ,1/16
R626	NRSA63J-0R0N	RESISTOR	0Ω,1/16
R629	NRSA63J-513N	RESISTOR	51kΩ,1/16
R701	NRSA63J-561N	RESISTOR	560Ω,1/16
R702	NRSA63J-102N	RESISTOR	1kΩ,1/16
R703	NRSA63J-122N	RESISTOR	1.2kΩ,1/16
R708	NRSA63J-203N	RESISTOR	20kΩ,1/16
R709	NRSA63J-391N	RESISTOR	390Ω,1/16
R710	NRSA63J-152N	RESISTOR	1.5kΩ,1/16
R711	NRSA63J-122N	RESISTOR	1.2kΩ,1/16
R720	NRSA63J-562N	RESISTOR	5.6kΩ,1/16
R721	NRSA63J-822N	RESISTOR	8.2kΩ,1/16
R722	NRSA63J-682N	RESISTOR	6.8kΩ,1/16
R723	NRSA63J-822N	RESISTOR	8.2kΩ,1/16
R726	NRSA63J-152N	RESISTOR	1.5kΩ,1/16
R727	NRSA63J-122N	RESISTOR	1.2kΩ,1/16
R728	NRSA63J-122N	RESISTOR	1.2kΩ,1/16
R729	NRSA63J-222N	RESISTOR	2.2kΩ,1/16
R730	NRSA63J-222N	RESISTOR	2.2kΩ,1/16
R731	NRSA63J-821N	RESISTOR	820Ω,1/16
R732	NRSA63J-821N	RESISTOR	820Ω,1/16
R733	NRSA63J-222N	RESISTOR	2.2kΩ,1/16
R734	NRSA63J-331N	RESISTOR	330Ω,1/16
R735	NRSA63J-102N	RESISTOR	1kΩ,1/16
R736	NRSA63J-102N	RESISTOR	1kΩ,1/16
R763	NRSA63J-102N	RESISTOR	1kΩ,1/16
R781	NRSA63J-0R0N	RESISTOR	0Ω,1/16
R783	NRSA63J-103N	RESISTOR	10kΩ,1/16
R784	NRSA63J-153N	RESISTOR	15kΩ,1/16
R785	NRSA63J-473N	RESISTOR	47kΩ,1/16
R786	NRSA63J-473N	RESISTOR	47kΩ,1/16
R787	NRSA63J-5R6N	RESISTOR	5.6Ω,1/16
R788	NRSA63J-5R6N	RESISTOR	5.6Ω,1/16
R803	NRSA63J-564N	RESISTOR	560kΩ,1/16
R804	NRSA63J-564N	RESISTOR	560kΩ,1/16
R807	NRSA63J-103N	RESISTOR	10kΩ,1/16
R808	NRSA63J-222N	RESISTOR	2.2kΩ,1/16
R809	NRSA63J-683N	RESISTOR	68kΩ,1/16
R810	NRSA63J-103N	RESISTOR	10kΩ,1/16
R811	NRSA63J-222N	RESISTOR	2.2kΩ,1/16
R812	NRSA63J-683N	RESISTOR	68kΩ,1/16
R813	NRSA63J-153N	RESISTOR	15kΩ,1/16
R814	NRSA63J-153N	RESISTOR	15kΩ,1/16
R815	NRSA63J-332N	RESISTOR	3.3kΩ,1/16
R816	NRSA63J-562N	RESISTOR	5.6kΩ,1/16
R817	NRSA63J-823N	RESISTOR	82kΩ,1/16
R818	NRSA63J-823N	RESISTOR	82kΩ,1/16
R819	NRSA63J-332N	RESISTOR	3.3kΩ,1/16
R820	NRSA63J-562N	RESISTOR	5.6kΩ,1/16
R821	NRSA63J-105N	RESISTOR	1MΩ,1/16
R822	NRSA63J-105N	RESISTOR	1MΩ,1/16
R824	NRSA63J-223N	RESISTOR	22kΩ,1/16
R825	NRSA63J-822N	RESISTOR	8.2kΩ,1/16
R826	NRSA63J-105N	RESISTOR	1MΩ,1/16
R827	NRSA63J-104N	RESISTOR	100kΩ,1/16
R828	NRSA63J-223N	RESISTOR	22kΩ,1/16
R829	NRSA63J-105N	RESISTOR	1MΩ,1/16
R831	NRSA63J-104N	RESISTOR	100kΩ,1/16
R832	NRSA63J-104N	RESISTOR	100kΩ,1/16
R833	NRSA63J-104N	RESISTOR	100kΩ,1/16

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R834	NRSA63J-823N	RESISTOR	82kΩ,1/16W
R835	NRSA63J-823N	RESISTOR	82kΩ,1/16W
R836	NRSA63J-104N	RESISTOR	100kΩ,1/16W
R837	NRSA63J-104N	RESISTOR	100kΩ,1/16W
R838	NRSA63J-104N	RESISTOR	100kΩ,1/16W
R840	NRSA63J-152N	RESISTOR	1.5kΩ,1/16W
R841	NRSA63J-333N	RESISTOR	33kΩ,1/16W
R843	NRSA63J-124N	RESISTOR	120kΩ,1/16W
R844	NRSA63J-683N	RESISTOR	68kΩ,1/16W
R845	NRSA63J-473N	RESISTOR	47kΩ,1/16W
R846	NRSA63J-104N	RESISTOR	100kΩ,1/16W
R847	NRSA63J-393N	RESISTOR	39kΩ,1/16W
R848	NRSA63J-393N	RESISTOR	39kΩ,1/16W
R851	NRSA63J-823N	RESISTOR	82kΩ,1/16W
R852	NRSA63J-223N	RESISTOR	22kΩ,1/16W
R853	NRSA63J-683N	RESISTOR	68kΩ,1/16W
R854	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R855	NRSA63J-223N	RESISTOR	22kΩ,1/16W
R856	NRSA63J-682N	RESISTOR	6.8kΩ,1/16W
R857	NRSA63J-105N	RESISTOR	1MΩ,1/16W
R858	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R859	NRSA63J-105N	RESISTOR	1MΩ,1/16W
R861	NRSA63J-183N	RESISTOR	18kΩ,1/16W
R862	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R863	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R864	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R865	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R866	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R867	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R868	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R869	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R870	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R871	NRSA63J-182N	RESISTOR	1.8kΩ,1/16W
R873	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R874	NRSA63J-332N	RESISTOR	3.3kΩ,1/16W
R875	NRSA63J-332N	RESISTOR	3.3kΩ,1/16W
R877	NRSA63J-182N	RESISTOR	1.8kΩ,1/16W
R878	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R879	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R880	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R881	NRSA63J-273N	RESISTOR	27kΩ,1/16W
R882	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R883	NRSA63J-561N	RESISTOR	560Ω,1/16W
R885	NRSA63J-122N	RESISTOR	1.2kΩ,1/16W
R887	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R891	NRSA63J-243N	RESISTOR	24kΩ,1/16W
R892	NRSA63J-912N	RESISTOR	9.1kΩ,1/16W
R893	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R894	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R895	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R896	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R897	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R898	NRSA63J-472N	RESISTOR	4.7kΩ,1/16W
R901	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R902	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R903	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R904	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R905	NRSA63J-241N	RESISTOR	240Ω,1/16W
R906	NRSA63J-751N	RESISTOR	750Ω,1/16W
R907	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R908	NRSA63J-682N	RESISTOR	6.8kΩ,1/16W
R909	NRSA63J-272N	RESISTOR	2.7kΩ,1/16W
R910	NRSA63J-122N	RESISTOR	1.2kΩ,1/16W
R911	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R912	NRSA63J-474N	RESISTOR	470kΩ,1/16W
R913	NRSA63J-153N	RESISTOR	15kΩ,1/16W
R914	NRSA63J-153N	RESISTOR	15kΩ,1/16W
R915	NRSA63J-183N	RESISTOR	18kΩ,1/16W
R916	NRSA63J-472N	RESISTOR	4.7kΩ,1/16W
R917	NRSA63J-683N	RESISTOR	68kΩ,1/16W
R918	NRSA63J-512N	RESISTOR	5.1kΩ,1/16W
R919	NRSA63J-104N	RESISTOR	100kΩ,1/16W
R920	NRSA63J-183N	RESISTOR	18kΩ,1/16W
R921	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R922	NRSA63J-472N	RESISTOR	4.7kΩ,1/16W
R923	NRSA63J-473N	RESISTOR	47kΩ,1/16W
R924	NRSA63J-333N	RESISTOR	33kΩ,1/16W
R925	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R926	NRSA63J-272N	RESISTOR	2.7kΩ,1/16W
R927	NRSA63J-472N	RESISTOR	4.7kΩ,1/16W
R928	NRSA63J-101N	RESISTOR	100Ω,1/16W
R930	NRSA63J-183N	RESISTOR	18kΩ,1/16W
R931	NRSA63J-223N	RESISTOR	22kΩ,1/16W
R932	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R933	NRSA63J-824N	RESISTOR	820kΩ,1/16W
R934	NRSA63J-822N	RESISTOR	8.2kΩ,1/16W
R935	NRSA63J-152N	RESISTOR	1.5kΩ,1/16W
R936	NRSA63J-223N	RESISTOR	22kΩ,1/16W
R937	NRSA63J-104N	RESISTOR	100kΩ,1/16W
R938	NRSA63J-154N	RESISTOR	150kΩ,1/16W
R939	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R940	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R941	NRSA63J-564N	RESISTOR	560kΩ,1/16W
R942	NRSA63J-223N	RESISTOR	22kΩ,1/16W
R945	NRSA63J-104N	RESISTOR	100kΩ,1/16W
R946	NRSA63J-473N	RESISTOR	47kΩ,1/16W
R947	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R948	NRSA63J-101N	RESISTOR	100Ω,1/16W
R949	NRSA63J-105N	RESISTOR	1MΩ,1/16W
R950	NRSA63J-473N	RESISTOR	47kΩ,1/16W
R951	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R952	NRSA63J-223N	RESISTOR	22kΩ,1/16W
R953	NRSA63J-223N	RESISTOR	22kΩ,1/16W
R954	NRSA63J-223N	RESISTOR	22kΩ,1/16W
R955	NRSA63J-223N	RESISTOR	22kΩ,1/16W
R956	NRSA63J-393N	RESISTOR	39kΩ,1/16W
R957	NRSA63J-562N	RESISTOR	5.6kΩ,1/16W
R958	NRSA63J-682N	RESISTOR	6.8kΩ,1/16W
R959	NRSA63J-562N	RESISTOR	5.6kΩ,1/16W
R960	NRSA63J-223N	RESISTOR	22kΩ,1/16W
R961	NRSA63J-105N	RESISTOR	1MΩ,1/16W
R962	NRSA63J-271N	RESISTOR	270Ω,1/16W
R963	NRSA63J-391N	RESISTOR	390Ω,1/16W
R965	NRSA63J-3R9N	RESISTOR	3.9Ω,1/16W
R966	NRSA63J-3R9N	RESISTOR	3.9Ω,1/16W
R967	NRSA63J-332N	RESISTOR	3.3kΩ,1/16W
R968	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R969	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R970	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R971	NRSA63J-3R9N	RESISTOR	3.9Ω,1/16W
R972	NRSA63J-3R9N	RESISTOR	3.9Ω,1/16W
R973	NRSA63J-332N	RESISTOR	3.3kΩ,1/16W
R974	NRSA63J-331N	RESISTOR	330Ω,1/16W
R975	NRSA63J-331N	RESISTOR	330Ω,1/16W

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R978	NRSA63J-334N	RESISTOR	330kΩ,1/16W
R979	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R980	NRSA63J-562N	RESISTOR	5.6kΩ,1/16W
R981	NRSA63J-821N	RESISTOR	820Ω,1/16W
R982	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R984	NRSA63J-183N	RESISTOR	18kΩ,1/16W
R985	NRSA63J-912N	RESISTOR	9.1kΩ,1/16W
RA1	PERE0532-104JY	NETWORK RESISTOR	100kΩ,1/16W
RA2	PERE0532-105JY	NETWORK RESISTOR	1MΩ,1/16W
RA3	PERE0560-105JY	NETWORK RESISTOR	1MΩ,1/16W
RA4	PERE0532-472JY	NETWORK RESISTOR	4.7kΩ,1/16W
RA6	PERE0560-222JY	NETWORK RESISTOR	2.2kΩ,1/16W
RA7	PERE0560-222JY	NETWORK RESISTOR	2.2kΩ,1/16W
RA8	PERE0560-473JY	NETWORK RESISTOR	47kΩ,1/16W
RA9	PERE0560-104JY	NETWORK RESISTOR	100kΩ,1/16W
RA10	PERE0560-222JY	NETWORK RESISTOR	2.2kΩ,1/16W
RA11	PERE0532-222JY	NETWORK RESISTOR	2.2kΩ,1/16W
RA12	PERE0560-103JY	NETWORK RESISTOR	10kΩ,1/16W
RA13	PERE0560-222JY	NETWORK RESISTOR	2.2kΩ,1/16W
RA14	PERE0532-103JY	NETWORK RESISTOR	10kΩ,1/16W
RA15	PERE0532-222JY	NETWORK RESISTOR	2.2kΩ,1/16W
RA16	PERE0532-103JY	NETWORK RESISTOR	10kΩ,1/16W
RA501	PERE0560-102JY	NETWORK RESISTOR	1kΩ,1/16W
RA801	PERE0532-222JY	NETWORK RESISTOR	2.2kΩ,1/16W
RA802	PERE0532-472JY	NETWORK RESISTOR	4.7kΩ,1/16W
RA901	PERE0475-103NY	NETWORK RESISTOR	10kΩ,1/16W
RA902	PERE0560-102JY	NETWORK RESISTOR	1kΩ,1/16W
RA903	PERE0560-102JY	NETWORK RESISTOR	1kΩ,1/16W
RA904	PERE0475-473NY	NETWORK RESISTOR	47kΩ,1/16W
RA905	PERE0475-331NY	NETWORK RESISTOR	330Ω,1/16W
RA906	PERE0475-332NY	NETWORK RESISTOR	3.3kΩ,1/16W
RA907	PERE0475-472NY	NETWORK RESISTOR	4.7kΩ,1/16W
RA908	PERE0560-332JY	NETWORK RESISTOR	3.3kΩ,1/16W
RA909	PERE0475-103NY	NETWORK RESISTOR	10kΩ,1/16W
RA910	PERE0560-472JY	NETWORK RESISTOR	4.7kΩ,1/16W
RA911	PERE0475-332NY	NETWORK RESISTOR	3.3kΩ,1/16W
C1	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C2	NEA71CM-106NZ	E CAPACITOR	10μF,16V
C3	NEA70JM-226NZ	E CAPACITOR	22μF,6.3V
C4	NCB31EK-103A	CAPACITOR	0.01μF,25V
C5	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C6	NEA70JM-226NZ	E CAPACITOR	22μF,6.3V
C7	NEA70JM-226NZ	E CAPACITOR	22μF,6.3V
C8	NCB31HK-102A	CAPACITOR	0.001μF,50V
C9	NCT06CH-101A	CAPACITOR	100pF,50V
C10	NCT06CH-270A	CAPACITOR	27pF,50V
C11	NCT06CH-101A	CAPACITOR	100pF,50V
C12	NCB31EK-103A	CAPACITOR	0.01μF,25V
C13	NCB31EK-103A	CAPACITOR	0.01μF,25V
C14	NCB31EK-472A	CAPACITOR	0.0047μF,25V
C15	NCB31EK-103A	CAPACITOR	0.01μF,25V
C16	NCB31EK-103A	CAPACITOR	0.01μF,25V
C18	NCT06CH-180A	CAPACITOR	18pF,50V
C19	NCT06CH-180A	CAPACITOR	18pF,50V
C21	NCT06CH-100A	CAPACITOR	10pF,50V
C22	NCT06CH-120A	CAPACITOR	12pF,50V
C23	NCB31EK-103A	CAPACITOR	0.01μF,25V
C24	NEE21CM-105RY	E CAPACITOR	1μF,16V
C25	NCB31EK-103A	CAPACITOR	0.01μF,25V
C26	NCB31EK-103A	CAPACITOR	0.01μF,25V
C27	NCB31EK-103A	CAPACITOR	0.01μF,25V
C30	NCB31HK-102A	CAPACITOR	0.001μF,50V

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C201	QCYA1EK-104	CAPACITOR	0.1μF,25
C202	QCYA1EK-104	CAPACITOR	0.1μF,25
C203	NCB31CK-333A	CAPACITOR	0.033μF,16
C204	NCB31CK-333A	CAPACITOR	0.033μF,16
C205	NCB31HK-562A	CAPACITOR	0.0056μF,50
C206	QCYA1CK-154	CAPACITOR	0.15μF,16
C207	NEA70JM-226NZ	E CAPACITOR	22μF,6.3
C208	NEA70JM-226NZ	E CAPACITOR	22μF,6.3
C209	NEA71HM-105NZ	E CAPACITOR	1μF,50
C210	NEA71HM-105NZ	E CAPACITOR	1μF,50
C212	QCYA1EK-104	CAPACITOR	0.1μF,25
C213	QCYA1EK-104	CAPACITOR	0.1μF,25
C214	NEA71CM-106NZ	E CAPACITOR	10μF,16
C215	NCT06CH-101A	CAPACITOR	100pF,50
C216	YU40470-104	CAPACITOR	0.1μF,50
C301	QCF81CZ-225	CAPACITOR	2.2μF,16
C302	QCF81CZ-225	CAPACITOR	2.2μF,16
C303	QCF81CZ-225	CAPACITOR	2.2μF,16
C304	NEA71HM-105NZ	E CAPACITOR	1μF,50
C305	NCB31HK-681A	CAPACITOR	680pF,50
C306	NCB31EK-103A	CAPACITOR	0.01μF,25
C307	NEE21DM-474RY	E CAPACITOR	0.47μF,20
C308	NCB31HK-331A	CAPACITOR	330pF,50
C309	QCYA1EK-104	CAPACITOR	0.1μF,25
C312	NCB31HK-332A	CAPACITOR	0.0033μF,50
C313	NCB31CK-473A	CAPACITOR	0.047μF,16
C314	NCB31EK-103A	CAPACITOR	0.01μF,25
C315	QCYA1EK-104	CAPACITOR	0.1μF,25
C316	NEA71CM-106NZ	E CAPACITOR	10μF,16
C351	QCFA1EZ-224	CAPACITOR	0.22μF,25
C352	QCFA1EZ-224	CAPACITOR	0.22μF,25
C353	QCFA1EZ-224	CAPACITOR	0.22μF,25
C354	NCB31EK-223A	CAPACITOR	0.022μF,25
C355	NCB31EK-223A	CAPACITOR	0.022μF,25
C356	NCB31EK-223A	CAPACITOR	0.022μF,25
C357	NCF31CZ-104A	CAPACITOR	0.1μF,16
C358	QCYA1CK-124	CAPACITOR	0.12μF,16
C359	QCYA1CK-124	CAPACITOR	0.12μF,16
C360	NCF31CZ-104A	CAPACITOR	0.1μF,16
C362	QCFA1CZ-105	CAPACITOR	1μF,16
C363	NEE20JM-475RY	E CAPACITOR	4.7μF,6.3
C401	NCB31HK-331A	CAPACITOR	330pF,50
C402	YU42058-H476Z	E CAPACITOR	47μ
C404	QCFA1CZ-105	CAPACITOR	1μF,16
C405	NCB31HK-152A	CAPACITOR	0.0015μF,50
C407	NCB31HK-152A	CAPACITOR	0.0015μF,50
C409	NCB31HK-681A	CAPACITOR	680pF,50
C410	NEE21AM-335RY	E CAPACITOR	3.3μF,10
C411	NCB31EK-123A	CAPACITOR	0.012μF,25
C412	NEE20JM-226RY	E CAPACITOR	22μF,6.3
C414	NEE21CM-105RY	E CAPACITOR	1μF,16
C415	QCYA1EK-563	CAPACITOR	0.056μF,25
C417	NCB31HK-332A	CAPACITOR	0.0033μF,50
C419	NEA70GM-476NZ	E CAPACITOR	47μF,4.0
C420	NEA70GM-476NZ	E CAPACITOR	47μF,4.0
C422	NEE20JM-475RY	E CAPACITOR	4.7μF,6.3
C423	NEA70JM-226NZ	E CAPACITOR	22μF,6.3
C425	YU42058-H476Z	E CAPACITOR	47μ
C427	NEE21CM-105RY	E CAPACITOR	1μF,16
C428	NCB31EK-223A	CAPACITOR	0.022μF,25
C429	NEE21DM-474RY	E CAPACITOR	0.47μF,20
C431	NCB31HK-272A	CAPACITOR	0.0027μF,50

#△ REF No.	PART No.	PART NAME, DESCRIPTION	
C432	QCYA1EK-104	CAPACITOR	0.1μF,25V
C433	NCT08CH-101A	CAPACITOR	100pF,50V
C434	NCT08CH-101A	CAPACITOR	100pF,50V
C435	NCT08CH-101A	CAPACITOR	100pF,50V
C436	NCT08CH-101A	CAPACITOR	100pF,50V
C437	NFV41HJ-273AY	F CAPACITOR	0.027μF,50V
C438	NCS31HJ-561A	CAPACITOR	560pF,50V
C439	NCB31HK-822A	CAPACITOR	0.0082μF,50V
C440	YU41970-A226XW	E CAPACITOR	22μF
C501	NEA70JM-476NZ	E CAPACITOR	47μF,6.3V
C502	NEA71HM-335NZ	E CAPACITOR	3.3μF,50V
C503	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C504	NEA71HM-225NZ	E CAPACITOR	2.2μF,50V
C505	NEA70GM-476NZ	E CAPACITOR	47μF,4.0V
C506	NCB31CK-104A	CAPACITOR	0.1μF,16V
C507	NCB31HK-332A	CAPACITOR	0.0033μF,50V
C508	NEA71HM-105NZ	E CAPACITOR	1μF,50V
C509	NEE20JM-475RY	E CAPACITOR	4.7μF,6.3V
C510	NEA71HM-105NZ	E CAPACITOR	1μF,50V
C511	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C512	NCT06CH-680A	CAPACITOR	68pF,50V
C513	NCS31HJ-561A	CAPACITOR	560pF,50V
C514	QCSA1HJ-561	CAPACITOR	560pF,50V
C515	NCT06CH-820A	CAPACITOR	82pF,50V
C517	NCT06CH-470A	CAPACITOR	47pF,50V
C518	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C519	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C520	NEA70JM-476NZ	E CAPACITOR	47μF,6.3V
C521	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C523	NCB31EK-153A	CAPACITOR	0.015μF,25V
C524	NCT06CH-221A	CAPACITOR	220pF,50V
C525	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C526	NCT06CH-220A	CAPACITOR	22pF,50V
C528	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C529	NCB31EK-103A	CAPACITOR	0.01μF,25V
C530	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C531	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C532	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C533	NEE20JM-225RY	E CAPACITOR	2.2μF,6.3V
C534	NEE20JM-475RY	E CAPACITOR	4.7μF,6.3V
C535	NCB31EK-103A	CAPACITOR	0.01μF,25V
C536	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C537	NEE21CM-105RY	E CAPACITOR	1μF,16V
C538	NCB31HK-122A	CAPACITOR	0.0012μF,50V
C539	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
C540	NCB31EK-103A	CAPACITOR	0.01μF,25V
C541	YU41415-J106AW	E CAPACITOR	10μF,6.3V
C542	NCB31CK-104A	CAPACITOR	0.1μF,16V
C543	NCB31CK-104A	CAPACITOR	0.1μF,16V
C548	NCT06CH-8R0A	CAPACITOR	8pF,50V
C549	NCT08CH-221A	CAPACITOR	220pF,50V
C561	NCB31HK-102A	CAPACITOR	0.001μF,50V
C562	YU41415-J106AW	E CAPACITOR	10μF,6.3V
C563	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C564	NEE21DM-474RY	E CAPACITOR	0.47μF,20V
C565	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C566	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C567	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C568	NEE21DM-474RY	E CAPACITOR	0.47μF,20V
C569	NEE21DM-474RY	E CAPACITOR	0.47μF,20V
C570	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C571	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C572	NCB31HK-102A	CAPACITOR	0.001μF,50V
C573	NCB31HK-102A	CAPACITOR	0.001μF,50V
C574	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C575	NCT06CH-220A	CAPACITOR	22pF,50V
C576	NCT06CH-5R0A	CAPACITOR	5pF,50V
C577	NCT06CH-121A	CAPACITOR	120pF,50V
C578	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C579	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C601	NEA70JM-476NZ	E CAPACITOR	47μF,6.3V
C602	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C603	NCB31EK-103A	CAPACITOR	0.01μF,25V
C604	NCT06CH-100A	CAPACITOR	10pF,50V
C605	NCB31CK-104A	CAPACITOR	0.1μF,16V
C607	NCB31EK-103A	CAPACITOR	0.01μF,25V
C608	NCB31EK-103A	CAPACITOR	0.01μF,25V
C609	NCB31CK-104A	CAPACITOR	0.1μF,16V
C610	NCT06CH-100A	CAPACITOR	10pF,50V
C611	NCT06CH-4R0A	CAPACITOR	4pF,50V
C612	NCB31EK-103A	CAPACITOR	0.01μF,25V
C613	NCB31EK-103A	CAPACITOR	0.01μF,25V
C614	NCB31CK-104A	CAPACITOR	0.1μF,16V
C616	NCT06CH-100A	CAPACITOR	10pF,50V
C617	NCB31EK-103A	CAPACITOR	0.01μF,25V
C619	NCB31HK-102A	CAPACITOR	0.001μF,50V
C621	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C622	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C623	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C624	QCFA1CZ-105	CAPACITOR	1μF,16V
C625	NCB31EK-103A	CAPACITOR	0.01μF,25V
C626	NCT06CH-150A	CAPACITOR	15pF,50V
C627	NCB31CK-104A	CAPACITOR	0.1μF,16V
C629	NCB31EK-103A	CAPACITOR	0.01μF,25V
C630	NCB31EK-103A	CAPACITOR	0.01μF,25V
C631	NCB31CK-104A	CAPACITOR	0.1μF,16V
C632	NCT06CH-101A	CAPACITOR	100pF,50V
C634	NCB31HK-102A	CAPACITOR	0.001μF,50V
C637	NCB31HK-682A	CAPACITOR	0.0068μF,50V
C701	NEA70JM-476NZ	E CAPACITOR	47μF,6.3V
C702	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C703	NCT06CH-390A	CAPACITOR	39pF,50V
C704	NCT06CH-6R0A	CAPACITOR	6pF,50V
C705	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C706	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C707	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C708	NCT06CH-180A	CAPACITOR	18pF,50V
C709	NCS31HJ-561A	CAPACITOR	560pF,50V
C711	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C712	NCT06CH-221A	CAPACITOR	220pF,50V
C715	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C716	NCT06CH-330A	CAPACITOR	33pF,50V
C718	NCT06CH-101A	CAPACITOR	100pF,50V
C719	NCT06CH-680A	CAPACITOR	68pF,50V
C720	NCT06CH-271A	CAPACITOR	270pF,50V
C722	NCF31HZ-103A	CAPACITOR	0.01μF,50V
C781	NCT06CH-5R0A	CAPACITOR	5pF,50V
C782	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C783	NCT06CH-181A	CAPACITOR	180pF,50V
C784	NCT06CH-181A	CAPACITOR	180pF,50V
C785	QCTA1CH-271	CAPACITOR	270pF,16V
C786	QCTA1CH-681	CAPACITOR	680pF,16V
C801	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C802	NEA71CM-106NZ	E CAPACITOR	10μF,16V

#△ REF No.	PART No.	PART NAME, DESCRIPTION	
C803	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C804	NEE21CM-105RY	E CAPACITOR	1μF,16V
C805	NEE21AM-335RY	E CAPACITOR	3.3μF,10V
C806	NEE21AM-335RY	E CAPACITOR	3.3μF,10V
C807	NEE21CM-105RY	E CAPACITOR	1μF,16V
C808	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C809	NCB31EK-103A	CAPACITOR	0.01μF,25V
C810	QCYA1CK-224	CAPACITOR	0.22μF,16V
C811	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C812	NCT06CH-181A	CAPACITOR	180pF,50V
C813	QCYA1CK-224	CAPACITOR	0.22μF,16V
C814	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C815	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C816	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C817	NCB31CK-473A	CAPACITOR	0.047μF,16V
C818	NCB31CK-473A	CAPACITOR	0.047μF,16V
C819	QCYA1HK-103	CAPACITOR	0.01μF,50V
C820	QCYA1HK-103	CAPACITOR	0.01μF,50V
C821	NCB31CK-473A	CAPACITOR	0.047μF,16V
C822	NCB31CK-473A	CAPACITOR	0.047μF,16V
C823	NEA71CM-106NZ	E CAPACITOR	10μF,16V
C824	NCT06CH-220A	CAPACITOR	22pF,50V
C831	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C832	NCB31CK-473A	CAPACITOR	0.047μF,16V
C833	NCB31CK-473A	CAPACITOR	0.047μF,16V
C834	NCB31CK-104A	CAPACITOR	0.1μF,16V
C835	NCB31CK-104A	CAPACITOR	0.1μF,16V
C836	NCB31CK-104A	CAPACITOR	0.1μF,16V
C837	NCB31CK-104A	CAPACITOR	0.1μF,16V
C838	QCFA1CZ-474	CAPACITOR	0.47μF,16V
C839	QCFA1CZ-474	CAPACITOR	0.47μF,16V
C840	NCB31CK-473A	CAPACITOR	0.047μF,16V
C841	NCB31CK-473A	CAPACITOR	0.047μF,16V
C842	NEE21VM-104RY	E CAPACITOR	0.1μF,35V
C843	NEA71CM-106NZ	E CAPACITOR	10μF,16V
C844	NCB31CK-104A	CAPACITOR	0.1μF,16V
C845	NCB31CK-104A	CAPACITOR	0.1μF,16V
C846	NCB31CK-473A	CAPACITOR	0.047μF,16V
C847	NCB31CK-473A	CAPACITOR	0.047μF,16V
C848	NCB31CK-104A	CAPACITOR	0.1μF,16V
C850	QCFA1CZ-105	CAPACITOR	1μF,16V
C851	NCB31CK-104A	CAPACITOR	0.1μF,16V
C852	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C853	NCB31CK-104A	CAPACITOR	0.1μF,16V
C854	NEA71CM-106NZ	E CAPACITOR	10μF,16V
C855	NCT06CH-100A	CAPACITOR	10pF,50V
C856	NCT06CH-270A	CAPACITOR	27pF,50V
C857	NCT06CH-330A	CAPACITOR	33pF,50V
C858	NEA70JM-476NZ	E CAPACITOR	47μF,6.3V
C859	NCT06CH-121A	CAPACITOR	120pF,50V
C901	NCT06CH-470A	CAPACITOR	47pF,50V
C902	NCT06CH-331A	CAPACITOR	330pF,50V
C903	NCB31CK-473A	CAPACITOR	0.047μF,16V
C905	NCB31HK-681A	CAPACITOR	680pF,50V
C906	NCT06CH-221A	CAPACITOR	220pF,50V
C907	NCB31CK-473A	CAPACITOR	0.047μF,16V
C908	NCB31CK-473A	CAPACITOR	0.047μF,16V
C909	NCB31CK-473A	CAPACITOR	0.047μF,16V
C910	NCB31EK-223A	CAPACITOR	0.022μF,25V
C912	NCB31CK-473A	CAPACITOR	0.047μF,16V
C913	NCB31HK-102A	CAPACITOR	0.001μF,50V
C914	YU41970-J106AW	E CAPACITOR	10μF,6.3V

#△ REF No.	PART No.	PART NAME, DESCRIPTION	
C915	NCB31CK-473A	CAPACITOR	0.047μF,1
C916	NCT06CH-5R0A	CAPACITOR	5pF,5
C917	NCB31EK-223A	CAPACITOR	0.022μF,2
C918	NCB31CK-104A	CAPACITOR	0.1μF,1
C920	NCB31EK-103A	CAPACITOR	0.01μF,2
C921	NCT06CH-220A	CAPACITOR	22pF,5
C922	NCB31CK-473A	CAPACITOR	0.047μF,1
C923	NCB31EK-103A	CAPACITOR	0.01μF,2
C924	NCT06CH-151A	CAPACITOR	150pF,5
C925	NCB31EK-103A	CAPACITOR	0.01μF,2
C926	NCT06CH-121A	CAPACITOR	120pF,5
C927	NCB31EK-103A	CAPACITOR	0.01μF,2
C928	NCB31CK-273A	CAPACITOR	0.027μF,1
C929	NCB31CK-273A	CAPACITOR	0.027μF,1
C930	NCF31CZ-104A	CAPACITOR	0.1μF,1
C932	NCB31CK-273A	CAPACITOR	0.027μF,1
C934	NCB31CK-473A	CAPACITOR	0.047μF,1
C935	NCF31CZ-104A	CAPACITOR	0.1μF,1
C936	NEA71CM-106NZ	E CAPACITOR	10μF,1
C937	NCB31EK-153A	CAPACITOR	0.015μF,2
C938	NCF31CZ-104A	CAPACITOR	0.1μF,1
C939	YU41970-J106AW	E CAPACITOR	10μF,6.3
C940	NCB31EK-183A	CAPACITOR	0.018μF,2
C941	QCYA1EK-183	CAPACITOR	0.018μF,2
C942	NCF31CZ-104A	CAPACITOR	0.1μF,1
C943	YU41970-J106AW	E CAPACITOR	10μF,6.3
C944	NEE21AM-335RY	E CAPACITOR	3.3μF,1
C945	NCF31CZ-104A	CAPACITOR	0.1μF,1
C946	NCF31CZ-104A	CAPACITOR	0.1μF,1
C947	YU41970-J106AW	E CAPACITOR	10μF,6.3
C948	NCF31CZ-104A	CAPACITOR	0.1μF,1
C949	NCF31CZ-104A	CAPACITOR	0.1μF,1
C950	NCT07CH-100A	CAPACITOR,AX350EG	10pF,5
C951	NCT07CH-100A	CAPACITOR,AX350EG	10pF,5
C952	NCF31CZ-104A	CAPACITOR	0.1μF,1
C953	NEA71CM-106NZ	E CAPACITOR	10μF,1
C954	NCF31CZ-104A	CAPACITOR	0.1μF,1
C955	QCYA1CK-224	CAPACITOR	0.22μF,1
C956	QCYA1CK-473	CAPACITOR	0.047μF,1
C957	NCF31CZ-104A	CAPACITOR	0.1μF,1
C958	NCF31CZ-104A	CAPACITOR	0.1μF,1
C959	NCB31EK-103A	CAPACITOR	0.01μF,2
C960	NCF31CZ-104A	CAPACITOR	0.1μF,1
C961	NEA71CM-106NZ	E CAPACITOR	10μF,1
C962	NCF31CZ-104A	CAPACITOR	0.1μF,1
C963	NCB31HK-332A	CAPACITOR	0.0033μF,5
C965	NCB31EK-472A	CAPACITOR	0.0047μF,2
C966	NCB31EK-472A	CAPACITOR	0.0047μF,2
C972	NCB31HK-332A	CAPACITOR	0.0033μF,5
C974	NCB31EK-472A	CAPACITOR	0.0047μF,2
C975	NCB31EK-472A	CAPACITOR	0.0047μF,2
C981	YU41415-D226CW	E CAPACITOR	22μF,2
C982	NCF31CZ-104A	CAPACITOR	0.1μF,1
C983	NEA70JM-226NZ	E CAPACITOR	22μF,6.3
C984	NEA71CM-106NZ	E CAPACITOR	10μF,1
C985	NCF31CZ-104A	CAPACITOR	0.1μF,1
L1	PU58201-100J	COIL	10μ
L401	PELN0755-P	OSC TRANSFORMER	
L402	YU40740-101K	COIL	100μ
L501	YU41135-220K	COIL	22μ
L503	YU40740-470K	COIL	47μ
L504	YU41134-330JY	COIL	33μ

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
L507	YU41134-100JY	COIL	10μH
L510	YU40740-100KY	COIL	10μH
L511	YU41134-220J	COIL	22μH
L601	YU40740-470K	COIL	47μH
L701	YU40740-470K	COIL	47μH
L702	YU41134-330JY	COIL	33μH
L703	YU41134-101J	COIL	100μH
L705	YU41134-221JY	COIL	220μH
L707	YU41134-560JY	COIL	56μH
L781	YU40740-470K	COIL	47μH
L782	YU41134-1R2MY	COIL	1.2μH
L783	YU41368	CHIP OSC COIL	
L801	YU40740-220K	COIL	22μH
L802	YU40740-220K	COIL	22μH
L805	YU40740-220K	COIL	22μH
L806	YU40740-470K	COIL	47μH
L901	YU41134-181JY	COIL	180μH
L902	YU41134-270JY	COIL	27μH
L903	YU41134-151JY	COIL	150μH
L904	YU41135-220K	COIL	22μH
L905	YU41135-220K	COIL	22μH
L906	YU41135-220K	COIL	22μH
L907	YU41135-220K	COIL	22μH
L908	YU41135-220K	COIL	22μH
L909	YU41134-221JY	COIL	220μH
X1	PEVB0588	CRYSTAL RESONATOR	
X2	YU40141	CRYSTAL RESONATOR	
X501	PEVB0616	CRYSTAL RESONATOR	
X901	PEVB0572-Z	CRYSTAL RESONATOR,AX200EG/AX400EG	
	PEVB0622-P	CRYSTAL RESONATOR,AX350EG	
CN1	PEMC0855-014-R	CONNECTOR	
CN2	PEMC0855-011-R	CONNECTOR	
CN3	PEMC0855-018-R	CONNECTOR	
CN4	YU41356-2-P	CONNECTOR	
CN6	YU41356-2-P	CONNECTOR	
CN7	PEMC0855-016-R	CONNECTOR	
CN8	PEMC0855-011-R	CONNECTOR	
CN9	PEMC1073-003-P	CONNECTOR	
CN10	PEMC0855-018-R	CONNECTOR	
CN11	PEMC0880-022-R	CONNECTOR	
CN12	PEMC0880-028-X	CONNECTOR	
CN13	PEMC1095-013-R	CONNECTOR	
CN14	PEMC0855-010-R	CONNECTOR	
CN15	PEMC0880-022-R	CONNECTOR	
CN16	PEMC0880-018-R	CONNECTOR	
CN20	PEMC0987-030-R	CONNECTOR	

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REAR BOARD ASSEMBLY <02>

PWBA1	YB20737I1	REAR BOARD ASSY,AX350EG
	YB20737H1	REAR BOARD ASSY,AX200EG
	YB20737G1	REAR BOARD ASSY,AX400EG
IC1	MB3785APFV	IC
IC2	MM1165GM	IC
Q1	DTA143EU	TRANSISTOR
Q3	2SB1302(ST)	TRANSISTOR
Q4	2SB1302(ST)	TRANSISTOR

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
Q5	DTC143EU	TRANSISTOR	
Q6	MPL1	TRANSISTOR	
Q7	2SB1121(TU)	TRANSISTOR	
Q9	DTC143EU	TRANSISTOR	
Q201	2SB1308(QR)	TRANSISTOR,AX400EG	
Q202	DTC124EU	TRANSISTOR,AX400EG	
Q203	2SB1302(ST)	TRANSISTOR	
Q204	DTC143EU	TRANSISTOR	
Q205	2SB1308(QR)	TRANSISTOR,AX400EG	
D1	MA736	SB DIODE	
D2	DWA010	SB DIODE	
D3	DAN202U	DIODE	
D101	MA8068	DIODE	
D103	MA8068	DIODE	
D104	MA8068	DIODE	
⚠ D201	MA704	DIODE	
R3	NRVA63D-103N	MF RESISTOR	10kΩ,1/16W
R4	NRVA63D-103N	MF RESISTOR	10kΩ,1/16W
R5	NRVA63D-823N	MF RESISTOR	82kΩ,1/16W
R6	NRVA63D-223N	MF RESISTOR	22kΩ,1/16W
R7	NRVA63D-682N	MF RESISTOR	6.8kΩ,1/16W
R8	NRVA63D-512N	MF RESISTOR	5.1kΩ,1/16W
R9	NRVA63D-103N	MF RESISTOR	10kΩ,1/16W
R10	NRVA63D-103N	MF RESISTOR	10kΩ,1/16W
R11	NRSA63J-274N	RESISTOR	270kΩ,1/16W
R12	NRSA63J-104N	RESISTOR	100kΩ,1/16W
R18	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R19	NRSA63J-471N	RESISTOR	470Ω,1/16W
R20	NRSA63J-391N	RESISTOR	390Ω,1/16W
R21	NRSA63J-470N	RESISTOR	47Ω,1/16W
R22	NRVA63D-303N	MF RESISTOR	30kΩ,1/16W
R23	NRVA63D-103N	MF RESISTOR	10kΩ,1/16W
R24	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R25	NRSA63J-471N	RESISTOR	470Ω,1/16W
R26	NRVA63D-243N	RESISTOR	24kΩ,1/16W
R27	NRVA63D-332N	MF RESISTOR	3.3kΩ,1/16W
R28	NRSA63J-682N	RESISTOR	6.8kΩ,1/16W
R29	NRVA63D-333N	MF RESISTOR	33kΩ,1/16W
R30	NRVA63D-302N	MF RESISTOR	3kΩ,1/16W
R31	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R32	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R35	NRSA63J-471N	RESISTOR	470Ω,1/16W
R37	NRSA63J-223N	RESISTOR	22kΩ,1/16W
R102	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R104	NRSA63J-682N	RESISTOR,AX400EG	6.8kΩ,1/16W
R105	NRSA63J-623N	RESISTOR,AX400EG	62kΩ,1/16W
R106	NRSA63J-0R0N	RESISTOR,AX200EG/AX350EG	0Ω,1/16W
	NRSA63J-152N	RESISTOR,AX400EG	1.5kΩ,1/16W
R107	NRSA63J-203N	RESISTOR	20kΩ,1/16W
R108	NRSA63J-152N	RESISTOR,AX400EG	1.5kΩ,1/16W
R109	NRVA62D-680N	RESISTOR	68Ω,1/16W
R201	NRSA63J-103N	RESISTOR,AX400EG	10kΩ,1/16W
R202	NRSA63J-681N	RESISTOR,AX400EG	680Ω,1/16W
R203	NRSA63J-103N	RESISTOR,AX400EG	10kΩ,1/16W
R204	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R205	NRSA63J-561N	RESISTOR	560Ω,1/16W
⚠ R206	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R208	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
C1	QCY81CK-105	CAPACITOR	1μF,16V
C2	QCY81CK-105	CAPACITOR	1μF,16V
C3	QCY81CK-105	CAPACITOR	1μF,16V
C5	QCY81CK-105	CAPACITOR	1μF,16V

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C6	QCY81CK-105	CAPACITOR	1μF,16V
C7	QCY81CK-105	CAPACITOR	1μF,16V
C8	QCY81CK-105	CAPACITOR	1μF,16V
C9	NCS31HJ-561A	CAPACITOR	560pF,50V
C10	NCB31HK-102A	CAPACITOR	0.001μF,50V
C11	NCB31HK-472A	CAPACITOR	0.0047μF,50V
C12	NCB31EK-103A	CAPACITOR	0.01μF,25V
C13	QCYA1CK-224	CAPACITOR	0.22μF,16V
C14	NCT06CH-431A	CAPACITOR	430pF,50V
C15	QCFA1EZ-104	CAPACITOR	0.1μF,25V
C17	QCYA1EK-104	CAPACITOR	0.1μF,25V
C18	NCB31EK-103A	CAPACITOR	0.01μF,25V
C20	NCS31HJ-561A	CAPACITOR	560pF,50V
C23	NCB31HK-472A	CAPACITOR	0.0047μF,50V
C24	NCB31EK-103A	CAPACITOR	0.01μF,25V
C25	NCB31EK-223A	CAPACITOR	0.022μF,25V
C26	QCY81CK-105	CAPACITOR	1μF,16V
C27	QCY81CK-105	CAPACITOR	1μF,16V
C29	QCY81CK-105	CAPACITOR	1μF,16V
C30	NEH81CM-226NZ	E CAPACITOR	22μF,16V
C32	QCY81CK-105	CAPACITOR	1μF,16V
C33	PECA0979	E CAPACITOR	47μF,16V
C34	NCB31HK-332A	CAPACITOR	0.0033μF,50V
C35	QCY81CK-105	CAPACITOR	1μF,16V
C36	QCY81CK-105	CAPACITOR	1μF,16V
C37	QCY81CK-105	CAPACITOR	1μF,16V
C39	NCB31EK-103A	CAPACITOR	0.01μF,25V
C40	NEH81CM-226NZ	E CAPACITOR	22μF,16V
C41	QCY81CK-105	CAPACITOR	1μF,16V
C42	QCYA1EK-104	CAPACITOR	0.1μF,25V
C45	QCY81CK-105	CAPACITOR	1μF,16V
C46	QCY81CK-105	CAPACITOR	1μF,16V
C49	NEA70JM-226NZ	E CAPACITOR	22μF,6.3V
C101	QER40GM-477	E CAPACITOR	470μF,4.0V
C102	NCB31EK-103A	CAPACITOR	0.01μF,25V
C201	NEA71CM-106NZ	E CAPACITOR,AX400EG	10μF,16V
C202	QER41AM-227	E CAPACITOR	220μF,10V
L1	PELN0790-100MP	COIL	10μH
L2	PELN0790-100MP	COIL	10μH
L3	PELN0790-390MP	COIL	39μH
L4	PELN0790-100MP	COIL	10μH
L5	PELN0790-470MP	COIL	47μH
L6	PELN0325-150KZ	COIL	15μH
L7	PELN0325-330KZ	COIL	33μH
L8	PELN0325-330KZ	COIL	33μH
L9	YU40740-220K	COIL	22μH
SW1	PESW0605-02-R	PUSH SWITCH	
SW2	PESW0675	SLIDE SWITCH,AX400EG	
SW3	PESW0662	SLIDE SWITCH,AX400EG	
T1	PELN1045-Z	SW TRANS	
J1	YQ31845-2	PIN JACK(SW)	
J2	PEMC1091	MINI JACK	
KNB1	YQ43087	KNOB(APS),AX400EG	
KNB2	YQ43806-2	KNOB(LIGHT),AX400EG	
⚠ TML1	YQ31792	BATTERY TREMINAL UNIT	
TML2	YQ31793	BATTERY TERMINAL UNIT	
CN1	PEMC1018-018-R	CONNECTOR	
CN2	PEMC1018-022-R	CONNECTOR	
CN3	PEMC1073-004-R	CONNECTOR	
CN4	PEMC1073-002-P	CONNECTOR,AX400EG	
CN5	PEMC1073-005-R	CONNECTOR	
⚠ CP1	ICP-N38	CIRCUIT PROTECTOR,AX400EG	
⚠ CP2	ICP-N38	CIRCUIT PROTECTOR	
⚠ CP3	ICP-N38	CIRCUIT PROTECTOR	
⚠ CP4	ICP-N10	CIRCUIT PROTECTOR	
⚠ CP5	ICP-N10	CIRCUIT PROTECTOR,AX350EG	

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SENSOR BOARD ASSEMBLY <05>

PWBA	YU42052-1-3	SENSOR BOARD ASSY

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CCD BOARD ASSEMBLY <06>

PWBA	YB20721E-SS	CCD BOARD ASSY	
IC201	MN3112SA	IC	
IC202	JCY0035	IC	
IC203	AN2018S	IC	
Q201	2SC4081(QR)	TRANSISTOR	
Q202	XP5501	TRANSISTOR	
Q203	2SC3931(CD)	TRANSISTOR	
Q204	2SC4081(QR)	TRANSISTOR	
Q205	2SC4081(QR)	TRANSISTOR	
D201	1SS355	DIODE	
D202	1SS355	DIODE	
D203	MA143	DIODE	
D204	1SS355	DIODE	
R201	NRSA63J-153N	RESISTOR	15kΩ,1/16
R202	NRSA63J-393N	RESISTOR	39kΩ,1/16
R203	NRSA63J-203N	RESISTOR	20kΩ,1/16
R204	NRSA63J-222N	RESISTOR	2.2kΩ,1/16
R205	NRSA63J-104N	RESISTOR	100kΩ,1/16
R206	NRSA63J-153N	RESISTOR	15kΩ,1/16
R207	NRSA63J-103N	RESISTOR	10kΩ,1/16
R208	NRSA63J-432N	RESISTOR	4.3kΩ,1/16
R209	NRSA63J-103N	RESISTOR	10kΩ,1/16
R210	NRSA63J-104N	RESISTOR	100kΩ,1/16
R211	NRSA63J-273N	RESISTOR	27kΩ,1/16
R212	NRSA63J-332N	RESISTOR	3.3kΩ,1/16
R213	NRSA63J-105N	RESISTOR	1MΩ,1/16
R214	NRSA63J-100N	RESISTOR	10Ω,1/16
R215	NRSA63J-562N	RESISTOR	5.6kΩ,1/16
R216	NRSA63J-222N	RESISTOR	2.2kΩ,1/16
R217	NRSA63J-101N	RESISTOR	100Ω,1/16
R218	NRSA63J-560N	RESISTOR	56Ω,1/16
R219	NRSA63J-560N	RESISTOR	56Ω,1/16
R220	NRSA63J-101N	RESISTOR	100Ω,1/16
R221	NRSA63J-393N	RESISTOR	39kΩ,1/16
R222	NRSA63J-103N	RESISTOR	10kΩ,1/16
R226	NRSA63J-0R0N	RESISTOR	0Ω,1/16
R228	NRSA63J-332N	RESISTOR	3.3kΩ,1/16
R229	NRSA63J-152N	RESISTOR	1.5kΩ,1/16
R230	NRSA63J-0R0N	RESISTOR	0Ω,1/16
R231	NRSA63J-101N	RESISTOR	100Ω,1/16
R232	NRSA63J-220N	RESISTOR	22Ω,1/16

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R233	NRSA63J-220N	RESISTOR	22Ω,1/16W
R234	NRSA63J-101N	RESISTOR	100Ω,1/16W
R235	NRSA63J-101N	RESISTOR	100Ω,1/16W
R238	NRSA63J-103N	RESISTOR	10kΩ,1/16W
C201	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C202	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C203	NCB31EK-103A	CAPACITOR	0.01μF,25V
C204	QCFA1CZ-105	CAPACITOR	1μF,16V
C205	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C206	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C207	NEA71CM-106NZ	E CAPACITOR	10μF,16V
C208	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C209	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C210	NEA70JM-226NZ	E CAPACITOR	22μF,6.3V
C211	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C212	NEA71EM-475NZ	E CAPACITOR	4.7μF,25V
C213	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C214	NEA71EM-475NZ	E CAPACITOR	4.7μF,25V
C215	QCYA1EK-104	CAPACITOR	0.1μF,25V
C216	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C217	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C218	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C219	NEE21CM-105RY	E CAPACITOR	1μF,16V
C220	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C221	NEA70JM-226NZ	E CAPACITOR	22μF,6.3V
C223	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C224	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C225	NCT06CH-470A	CAPACITOR	47pF,50V
C226	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C227	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C228	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C229	NCT06CH-560A	CAPACITOR	56pF,50V
C230	NCT06CH-101A	CAPACITOR	100pF,50V
C231	NEA70JM-107NP	E CAPACITOR	100μF,6.3V
L201	YU40740-220K	COIL	22μH
L202	YU40740-220K	COIL	22μH
L203	YU40740-220K	COIL	22μH
L204	YU40740-220K	COIL	22μH
L205	YU40740-220K	COIL	22μH
L206	YU41607-Y	FERR.BEADS	
L207	YU41607-Y	FERR.BEADS	
L208	YU41607-Y	FERR.BEADS	
X201	PEVB0504-P	CXO	
CN201	PEMC1071	CCD SOCKET	
CN202	PEMC0880-028-X	CONNECTOR	
CN203	YU41356-4-R	CONNECTOR	

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APS BOARD ASSEMBLY(GR-AX400EG) <07>

PWBA2	YB20737A2	APS BOARD ASSY
PS1	PESC1163	PH INTERRUPTER
ML1	ML-Y00719A	WIRE

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IR BOARD ASSEMBLY <08>

PWBA	YQ31871-1-1	IR BOARD ASSY,AX350EG/AX400EG
	YQ31964	IR BOARD ASSY,AX200EG

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OPERATION(CAMERA)BOARD ASSEMBLY <09>

PWBA	YQ20803-3-3	OPERATION(CAMERA)BOARD ASSY,AX400EG
	YQ20803-4-3	OPERATION(CAMERA)BOARD ASSY,AX200EG/AX350EG

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UPPER DRUM BOARD <40>

PWB	YDM3073-2-1	BOARD (UPPER DRUM)

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E.VF BOARD ASSEMBLY (GR-AX200EG/AX400EG) <50>

PWBA	YQ31803-600	E.VF BOARD ASSY	
IC1	BA7149F	IC	
Q1	2SA1037K	TRANSISTOR,TR1	
	or 2SA1179	TRANSISTOR,TR1	
	or 2SA1235	TRANSISTOR,TR1	
Q2	2SC4132	TRANSISTOR,TR2	
Q3	2SC4618	TRANSISTOR,TR3	
	or 2SC4655	TRANSISTOR,TR3	
D1	RLS245	DIODE	
R1	YQ31803-501	RESISTOR	9.1kΩ,1/10W
R2	QRSA08G-333YN	RESISTOR	33kΩ,1/10W
R3	QRSA08J-3R9YN	RESISTOR	3.9Ω,1/10W
R4	QRSA08J-390YN	RESISTOR	39Ω,1/10W
R5	YU30595-111	RESISTOR	390Ω,1/10W
R6	YU30595-113	RESISTOR	91kΩ,1/10W
R7	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R8	YQ31803-502	RESISTOR	2.2kΩ,1/10W
R9	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
VR1	YQ31803-504	V RESISTOR,V SIZE	
VR2	YQ31803-505	V RESISTOR,H HOLD	
VR4	YQ31803-506	V RESISTOR,BRIGHT	
R10	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R11	QRSA08J-330YN	RESISTOR	33Ω,1/10W
R12	QRSA08J-113YN	RESISTOR	11kΩ,1/10W
R13	YQ31803-503	RESISTOR	3.9kΩ,1/10W
R14	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
R15	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R16	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R17	QRSA08J-102YN	RESISTOR	1kΩ,1/10W

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R18	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R19	QRSA08F-103YN	RESISTOR	10kΩ,1/10W
R20	QRSA08F-152YN	RESISTOR	1.5kΩ,1/10W
R21	QRSA08J-275YN	RESISTOR	2.7MΩ,1/10W
R22	QRSA08J-275YN	RESISTOR	2.7MΩ,1/10W
R23	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
R24	QRSA08J-154YN	RESISTOR	150kΩ,1/10W
R25	QRSA08J-2R7YN	RESISTOR	2.7Ω,1/10W
R26	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R27	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
C1	YQ31803-507	CAPACITOR	0.22μF,16V
C2	YQ31304-503	CAPACITOR	1μF,16V
C3	YQ31304-504	CAPACITOR	1500pF,50V
C4	YQ31304-503	CAPACITOR	1μF,16V
C5	YQ31304-506	E CAPACITOR	100μF,10V
C6	YQ31304-506	E CAPACITOR	100μF,10V
C7	YQ31304-506	E CAPACITOR	100μF,10V
C8	YQ31304-503	CAPACITOR	1μF,16V
C9	YQ31392-501	CAPACITOR	100pF,16V
C10	YU30531-163	CAPACITOR	0.047μF
C11	QER61HM-100	E CAPACITOR	10pF,50V
C12	YQ31803-508	F CAPACITOR	6200pF,100V
C13	YQ31304-506	E CAPACITOR	100μF,10V
C14	YQ31304-507	CAPACITOR	1500pF,630V
L1	YQ30723-115	COIL	100μH
TH1	YU30236-110	THERMISTOR	
WR1	YQ31803-580	FPC	
⚠ FBT1	YQ31803-550	FLY BACK TRANS	
HLC1	YQ31803-560	H.COIL	
CN1	YQ31803-570	CONNECTOR	
CN2	YQ31803-571	CONNECTOR	
CN3	YQ31803-572	CONNECTOR	

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PBL BOARD ASSEMBLY(GR-AX350EG) <51>

PWBA1	YB20727B1-02	PBL BOARD ASSY	
IC101	TC7W04FU	IC	
IC102	TA75S01F	IC	
IC103	FA7615M-XE	IC	
Q101	2SC3646(ST)	TRANSISTOR	
Q102	2SK1254S	TRANSISTOR	
Q103	XN6534	PAIR TRANSISTOR	
Q104	XN6534	PAIR TRANSISTOR	
D101	MA110	DIODE	
D103	SB07-03C-X	SB DIODE	
D104	MA110	DIODE	
R101	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R102	NRSA63J-105N	RESISTOR	1MΩ,1/16W
R103	NRVA63D-123N	MF RESISTOR	12kΩ,1/16W
R104	NRSA63J-274N	RESISTOR	270kΩ,1/16W
R106	NRVA63D-202N	RESISTOR	2kΩ,1/16W
R107	NRVA63D-563N	MF RESISTOR	56kΩ,1/16W
R108	NRVA63D-133N	MF RESISTOR	13kΩ,1/16W
R109	NRVA63D-563N	MF RESISTOR	56kΩ,1/16W
R111	NRSA63J-274N	RESISTOR	270kΩ,1/16W
R112	NRSA63J-104N	RESISTOR	100kΩ,1/16W
R113	NRVA63D-223N	MF RESISTOR	22kΩ,1/16W

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R115	NRVA63D-223N	MF RESISTOR	22kΩ,1/16
R116	NRVA63D-223N	MF RESISTOR	22kΩ,1/16
R117	NRVA63D-472N	MF RESISTOR	4.7kΩ,1/16
R118	NRSA63J-682N	RESISTOR	6.8kΩ,1/16
R120	NRSA63J-681N	RESISTOR	680Ω,1/16
R121	NRSA63J-103N	RESISTOR	10kΩ,1/16
R123	NRSA63J-683N	RESISTOR	68kΩ,1/16
R124	NVP1202-102N	V RESISTOR,REG 13.5V	
R125	NRSA63J-222N	RESISTOR	2.2kΩ,1/16
R126	NRSA63J-472N	RESISTOR	4.7kΩ,1/16
R127	NRSA63J-333N	RESISTOR	33kΩ,1/16
R128	NRSA63J-103N	RESISTOR	10kΩ,1/16
R129	NRSA63J-104N	RESISTOR	100kΩ,1/16
R130	NRSA63J-273N	RESISTOR	27kΩ,1/16
R131	NRVA63D-151N	MF RESISTOR	150Ω,1/16
R135	NRSA63J-623N	RESISTOR	62kΩ,1/16
R136	NVP1202-223N	V RESISTOR,BRIGHT	
R137	NRSA63J-473N	RESISTOR	47kΩ,1/16
R138	NRSA63J-393N	RESISTOR	39kΩ,1/16
R139	NVP1202-223N	V RESISTOR,COLOR LEVEL	
R140	NRSA63J-563N	RESISTOR	56kΩ,1/16
R141	NRSA63J-184N	RESISTOR	180kΩ,1/16
R144	NRSA63J-562N	RESISTOR	5.6kΩ,1/16
R145	NRSA63J-562N	RESISTOR	5.6kΩ,1/16
R146	NRSA63J-821N	RESISTOR	820Ω,1/16
R147	NRSA63J-821N	RESISTOR	820Ω,1/16
R148	NRSA63J-101N	RESISTOR	100Ω,1/16
R150	NRSA63J-101N	RESISTOR	100Ω,1/16
C101	NCB31EK-103A	CAPACITOR	0.01μF,25
C102	QCFA1CZ-105	CAPACITOR	1μF,16
C103	NCB31EK-103A	CAPACITOR	0.01μF,25
C104	NCF31CZ-104A	CAPACITOR	0.1μF,16
C105	NCF31CZ-104A	CAPACITOR	0.1μF,16
C106	QCTA2CH-122	CAPACITOR	0.0012μF,160
C107	YU41970-G476XW	E CAPACITOR	47μ
C108	NCF31CZ-104A	CAPACITOR	0.1μF,16
C109	NCF31CZ-104A	CAPACITOR	0.1μF,16
C110	NEE21AM-476RZ	E CAPACITOR	47μF,10
C111	QCFA1CZ-225	CAPACITOR	2.2μF,16
C112	NCB31EK-223A	CAPACITOR	0.022μF,25
C113	NCT07CH-330A	CAPACITOR	33pF,50
C114	NEE21DM-226RZ	E CAPACITOR	22μF,20
C115	NCF31CZ-104A	CAPACITOR	0.1μF,16
C116	NEE21CM-336RZ	E CAPACITOR	33μF,16
C117	QCFA1CZ-225	CAPACITOR	2.2μF,16
C120	NEE20JM-225RY	E CAPACITOR	2.2μF,6.3
C121	YU41970-A106AW	E CAPACITOR	10μ
C122	NCF31CZ-104A	CAPACITOR	0.1μF,16
C123	NCB31HK-102A	CAPACITOR	0.001μF,50
C124	NCB31HK-102A	CAPACITOR	0.001μF,50
C125	NCT07CH-560A	CAPACITOR	56pF,50
C126	NCT07CH-560A	CAPACITOR	56pF,50
L101	YU41135-220K	COIL	22μ
L102	PELN0999-681MP	COIL	680μ
L103	YU41135-220K	COIL	22μ
T101	PELN1069-R	SW TRANS	
CN101	PEMC0855-010-R	CONNECTOR	
CN102	PEMC0967-012-P	CONNECTOR	
CN103	PEMC0907-010-P	CONNECTOR	

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	

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CLD BOARD ASSEMBLY(GR-AX350EG) <52>

PWBA2	YB20727B2-02	CLD BOARD ASSY	
IC201	CXA1785AR	IC	
IC202	CXD2403AR	IC	
Q201	XP2501	TRANSISTOR	
D201	MA365	DIODE	
R201	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R202	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R219	NRVA63D-273N	MF RESISTOR	27kΩ,1/16W
R220	NRVA63D-243N	RESISTOR	24kΩ,1/16W
R222	NRVA63D-223N	MF RESISTOR	22kΩ,1/16W
R223	NRVA63D-273N	MF RESISTOR	27kΩ,1/16W
R224	NRSA63J-393N	RESISTOR	39kΩ,1/16W
R225	NVP1202-223N	V RESISTOR,SUB BRT R	
R226	NRSA63J-393N	RESISTOR	39kΩ,1/16W
R227	NRSA63J-393N	RESISTOR	39kΩ,1/16W
R228	NVP1202-223N	V RESISTOR,SUB BRT B	
R229	NRSA63J-393N	RESISTOR	39kΩ,1/16W
R235	NRSA63J-752N	RESISTOR	7.5kΩ,1/16W
R236	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R245	NRSA63J-101N	RESISTOR	100Ω,1/16W
R248	NRSA63J-393N	RESISTOR	39kΩ,1/16W
R249	NVP1202-223N	V RESISTOR,CONTRAST	
R250	NRSA63J-393N	RESISTOR	39kΩ,1/16W
R251	NRVA63D-183N	MF RESISTOR	18kΩ,1/16W
R252	NRSA63J-564N	RESISTOR	560kΩ,1/16W
R253	NRSA63J-473N	RESISTOR	47kΩ,1/16W
R254	NRSA63J-563N	RESISTOR	56kΩ,1/16W
R255	NRSA63J-271N	RESISTOR	270Ω,1/16W
R256	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R257	NRVA63D-472N	MF RESISTOR	4.7kΩ,1/16W
R258	NRVA63D-472N	MF RESISTOR	4.7kΩ,1/16W
R259	NRSA63J-562N	RESISTOR	5.6kΩ,1/16W
R260	NRSA63J-474N	RESISTOR	470kΩ,1/16W
R261	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R262	NRSA63J-333N	RESISTOR	33kΩ,1/16W
R263	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R264	NRSA63J-333N	RESISTOR	33kΩ,1/16W
R265	NVP1202-223N	V RESISTOR,PLL	
R266	NRSA63J-273N	RESISTOR	27kΩ,1/16W
R267	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R268	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R270	NRVA63D-122N	MF RESISTOR	1.2kΩ,1/16W
R271	NRVA63D-183N	MF RESISTOR	18kΩ,1/16W
R274	NRVA63D-563N	MF RESISTOR	56kΩ,1/16W
R275	NRVA63D-363N	MF RESISTOR	36kΩ,1/16W
C201	NEE21AM-225RY	E CAPACITOR	2.2μF,10V
C202	YU41970-J106AW	E CAPACITOR	10μF,6.3V
C207	NCB31EK-103A	CAPACITOR	0.01μF,25V
C208	NCB31EK-103A	CAPACITOR	0.01μF,25V
C214	QCFA1CZ-105	CAPACITOR	1μF,16V
C215	QCFA1CZ-105	CAPACITOR	1μF,16V
C216	QCFA1CZ-105	CAPACITOR	1μF,16V
C217	NEE21CM-225RY	E CAPACITOR	2.2μF,16V
C218	NCB31EK-103A	CAPACITOR	0.01μF,25V
C219	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C220	NCB31EK-103A	CAPACITOR	0.01μF,25V
C221	NCB31EK-103A	CAPACITOR	0.01μF,25V
C222	NCB31EK-103A	CAPACITOR	0.01μF,25V
C223	NCB31EK-103A	CAPACITOR	0.01μF,25V
C224	NCB31EK-103A	CAPACITOR	0.01μF,25V
C225	NCB31EK-103A	CAPACITOR	0.01μF,25V
C226	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C227	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C228	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C229	NCB31EK-103A	CAPACITOR	0.01μF,25V
C230	NCB31HK-682A	CAPACITOR	0.0068μF,50V
C231	NEE21AM-225RY	E CAPACITOR	2.2μF,10V
C232	NCB31EK-103A	CAPACITOR	0.01μF,25V
C233	QCFA1CZ-105	CAPACITOR	1μF,16V
C234	NEE21AM-225RY	E CAPACITOR	2.2μF,10V
C235	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C237	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C238	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C239	QCF81CZ-225	CAPACITOR	2.2μF,16V
C240	NCB31HK-332A	CAPACITOR	0.0033μF,50V
C241	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C242	NCT07CH-101A	CAPACITOR	100pF,50V
C243	NCB31HK-102A	CAPACITOR	0.001μF,50V
C244	NCB31EK-103A	CAPACITOR	0.01μF,25V
C245	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C246	NEE21CM-225RY	E CAPACITOR	2.2μF,16V
C247	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C249	NCF31CZ-104A	CAPACITOR	0.1μF,16V
L201	PELN0584-100JY	COIL	10μH
L203	PELN0584-100JY	COIL	10μH
L204	PELN0584-100JY	COIL	10μH
L205	PELN0865-6R8KY	COIL	6.8μH
CN201	YU41358-12-R	CONNECTOR	
CN202	PEMC0880-016-R	CONNECTOR	

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BL BOARD ASSEMBLY(GR-AX350EG) <53>

PWBA3	YB20727B3-02	BL BOARD ASSY
BL301	PEDP0176	LAMP
CN301	YU41359-10-P	CONNECTOR

SECTION 6
TECHNICAL INFORMATION

6.1 EMERGENCY DISPLAY

Whenever some abnormal signal is supplied to mechacon CPU, an error number (E 04, for example) displayed on the electronic view finder.

E. VF DISPLAY	Symptom	Mode when observed	Resulting mode
E 06	CAPSTAN FG input absent	EDIT	STOP
E 04	DRUM FF input absent	DRUM rotation	STOP
E 03	SUPPLY REEL FG input absent	REC, PLAY, SEARCH, FF	STOP
E 02	Mode control motor rotates for more than 10 sec, without shift to next mode.	UNLOADING	Mode continues
E 01	Mode control motor rotates for more than 10 sec, without shift to next mode.	LOADING	Mode continues

Emergency mode : Indication for 5 minutes, then power OFF
Port states : Same as Stop mode
Effective key : POWER
Shifted mode : Power OFF